Permit

Environmental Protection Act 1994

Environmental authority EPPR00573913

This environmental authority is issued by the administering authority under Chapter 5 of the Environmental Protection Act 1994.

Environmental authority number: EPPR00573913

Environmental authority takes effect on the day the authority is issued.

The anniversary date of this environmental authority remains 4 January. The payment of the annual fee will be due each year on this day.

Environmental authority holder

Name	Registered address
VEOLIA ENVIRONMENTAL SERVICES (AUSTRALIA) PTY LTD	Level 4, 65 Pirrama Road PYRMONT NSW 2009

Environmentally relevant activity and location details

Environmentally relevant activities	Location
ERA 15 - Fuel burning Using fuel burning equipment that is capable of burning at least 500kg of fuel in an hour	55 Champions Way WILLOWBANK QLD 4306 – Lot 3 on SP167885
ERA 54 - Mechanical waste reprocessing 2: Operating a facility for receiving and mechanically reprocessing, in a year, the following quantity of general waste- (c) more than 10,000t	
ERA 54 - Mechanical waste reprocessing 3: Operating a facility for receiving and mechanically reprocessing, in a year, the following quantity of category 2 regulated waste- (c) more than 10,000t	
ERA 54 - Mechanical waste reprocessing 4: Operating a facility for receiving and mechanically reprocessing, in a year, the following quantity of category 1 regulated waste- (c) more than 10,000t	
ERA 55 - Other waste reprocessing or treatment 1: Operating a facility for receiving and reprocessing or treating, in a year, the following quantity of general waste- (c) more than 10,000t	

Environmentally relevant activities	Location
ERA 55 - Other waste reprocessing or treatment 2: Operating a facility for receiving and reprocessing or treating, in a year, the following quantity of category 2 regulated waste- (c) more than 10,000t	
ERA 55 - Other waste reprocessing or treatment 3: Operating a facility for receiving and reprocessing or treating, in a year, the following quantity of category 1 regulated waste- (c) more than 10,000t	
ERA 55 - Other waste reprocessing or treatment 4: Operating a facility for receiving and reprocessing or treating clinical waste or quarantine waste	
ERA 53 - Organic material processing Processing more than 200t of organic material in a year - (a) by composting the organic material	
ERA 61 - Thermal waste reprocessing and treatment 2: Thermally reprocessing or treating, in a year, the following quantity of category 2 regulated waste- (c) more than 10,000t	
ERA 61 - Thermal waste reprocessing and treatment 3: Thermally reprocessing or treating, in a year, the following quantity of category 1 regulated waste- (c) more than 10,000t	
ERA 60 - Waste disposal 1: Operating a facility for disposing of, in a year, the following quantity of waste mentioned in subsection (1)(a) (d) more than 200,000t	

Additional information for applicants

Environmentally relevant activities

The description of any environmentally relevant activity (ERA) for which an environmental authority (EA) is issued is a restatement of the ERA as defined by legislation at the time the EA is issued. Where there is any inconsistency between that description of an ERA and the conditions stated by an EA as to the scale, intensity or manner of carrying out an ERA, the conditions prevail to the extent of the inconsistency.

An EA authorises the carrying out of an ERA and does not authorise any environmental harm unless a condition stated by the EA specifically authorises environmental harm.

A person carrying out an ERA must also be a registered suitable operator under the *Environmental Protection Act 1994* (EP Act).

Contaminated land

It is a requirement of the EP Act that an owner or occupier of contaminated land give written notice to the administering authority if they become aware of the following:

- the happening of an event involving a hazardous contaminant on the contaminated land (notice must be given within 24 hours); or
- a change in the condition of the contaminated land (notice must be given within 24 hours); or
- a notifiable activity (as defined in Schedule 3) having been carried out, or is being carried out, on the contaminated land (notice must be given within 20 business days);

that is causing, or is reasonably likely to cause, serious or material environmental harm.

For further information, including the form for giving written notice, refer to the Queensland Government website www.qld.gov.au, using the search term 'duty to notify'.

Take effect

Please note that, in accordance with section 200 of the EP Act, an EA has effect:

a) if the authority is for a prescribed ERA and it states that it takes effect on the day nominated by the holder of the authority in a written notice given to the administering authority-on the nominated day; or

b) if the authority states a day or an event for it to take effect-on the stated day or when the stated event happens; or

c) otherwise - on the day the authority is issued.

However, if the EA is authorising an activity that requires an additional authorisation (a relevant tenure for a resource activity, a development permit under the *Planning Act 2016* or an SDA Approval under the *State Development and Public Works Organisation Act 1971*), this EA will not take effect until the additional authorisation has taken effect.

If this EA takes effect when the additional authorisation takes effect, you must provide the administering authority written notice within 5 business days of receiving notification of the related additional authorisation taking effect.

If you have incorrectly claimed that an additional authorisation is not required, carrying out the ERA without the additional authorisation is not legal and could result in your prosecution for providing false or misleading information or operating without a valid environmental authority.



Signature

03 February 2025

Date

Daniel Spelchan
Department of the Environment, Tourism, Science and Innovation
Delegate of the administering authority
Environmental Protection Act 1994

Enquiries:
Waste Assessment
Department of the Environment, Tourism, Science and Innovation
Phone: 1300 130 372
Email: palm@des.qld.gov.au

Obligations under the *Environmental Protection Act 1994*

In addition to the requirements found in the conditions of this environmental authority, the holder must also meet their obligations under the EP Act, and the regulations made under the EP Act. For example, the holder must comply with the following provisions of the Act:

- general environmental duty (section 319)
- duty to notify environmental harm (section 320-320G)
- offence of causing serious or material environmental harm (sections 437-439)
- offence of causing environmental nuisance (section 440)
- offence of depositing prescribed water contaminants in waters and related matters (section 440ZG)
- offence to place contaminant where environmental harm or nuisance may be caused (section 443)

Conditions of environmental authority EPPR00573913

Part Identification	Relevant ERAs
Part 1	ERA 15
Part 2	ERA 53(a), ERA 54(2)(c), ERA 54(3)(c), ERA 54(4)(c), ERA 55(1)(c), ERA 55(2)(c), ERA 55(3)(c), ERA 55(4), ERA 61(2)(c) and ERA 61(3)(c)
Part 3	ERA 53(a)
Part 4	ERA 55(1)(c), ERA 55(2)(c), ERA 55(3)(c)
Part 5	ERA 61(3)(c)
Part 6	ERA 60(1)(d)

Part 1: Conditions for ERA 15-Fuel burning

Location: 55 Champions Way WILLOWBANK QLD 4306
Lot 3 on Plan SP167885

Relevant activities:
ERA 15-Fuel burning >500kg hr

Previous Permit:
IPCE01682809 – Concurrence Agency Response

The environmentally relevant activity conducted at the location as described above must be conducted in accordance with the following site-specific conditions of approval.

Agency interest: General	
Condition number	**Condition**
1-A1	In carrying out an ERA to which this approval relates, all reasonable and practicable measures must be taken to prevent and / or to minimise the likelihood of environmental harm being caused.
1-A2	The operator of an ERA to which this approval relates must: (a) install all measures, plant and equipment necessary to ensure compliance with the conditions of this approval; and (b) maintain such measures, plant and equipment in a proper and efficient condition; and (c) operate such measures, plant and equipment in a proper and efficient manner.
1-A3	From commencement of an ERA to which this approval relates, a site based management plan (SBMP) must be implemented. The SBMP must identify all sources of environmental harm, including but not limited to the actual and potential release of all contaminants, the potential impact of these sources and what actions will be taken to prevent the likelihood of environmental harm being caused. The SBMP must also provide for the review and 'continual improvement' in the overall environmental performance of all ERAs that are carried out. The SBMP must address the following matters: (a) Environmental commitments - a commitment by senior management to achieve specified and relevant environmental goals. (b) Identification of environmental issues and potential impacts. (c) Control measures for routine operations to minimise likelihood of environmental harm. (d) Contingency plans and emergency procedures for non-routine situations. (e) Organisational structure and responsibility. (f) Effective communication. (g) Monitoring of contaminant releases. (h) Conducting environmental impact assessments. (i) Staff training.

	(j) Record keeping. (k) Periodic review of environmental performance and continual improvement.
1-A4	The site based management plan must not be implemented or amended in a way that contravenes any condition of this approval.
1-A5	Record, compile and keep all monitoring results required by this approval and present this information to the administering authority when requested.
1-A6	All records required by this approval must be kept for 5 years.
1-A7	Telephone the administering authority's Pollution Hotline or local office as soon as practicable after becoming aware of any release of contaminants not in accordance with the conditions of this approval.
1-A8	A competent person(s) must conduct any monitoring required by this approval.
1-A9	All instruments, equipment and measuring devices used for measuring or monitoring in accordance with any condition of this approval must be calibrated, and appropriately operated and maintained.
1-A10	The daily operation of the waste water treatment system and pollution control equipment must be carried out by a person(s) with appropriate experience and/or qualifications to ensure the effective operation of that treatment system and control equipment.
1-A11	**Spill Kit** An appropriate spill kit, personal protective equipment and relevant operator instructions/emergency procedure guides for the management of wastes and chemicals associated with the ERA must be kept at the site, and in each vehicle used if the activity is a mobile ERA.
1-A12	Anyone operating under this approval must be trained in the use of the spill kit.
Agency interest: Air	
Condition number	**Condition**
1-B1	The release of noxious or offensive odours or any other noxious or offensive airborne contaminants resulting from the activity must not cause a nuisance at any nuisance sensitive or commercial place.
1-B2	When requested by the administering authority, monitoring must be undertaken to investigate any complaint of environmental nuisance caused by a release to the atmosphere, and the results thereof notified to the administering authority within 14 days following completion of monitoring.
1-B3	Monitoring of any releases to the atmosphere required by a condition of this approval must be carried out in accordance with the Australian Standard AS 4323.1 - 1995 'Stationary source

	emissions Method 1: Selection of sampling positions' (or more recent editions). The following tests must be performed for each required determination: (a) gas velocity and volume flow rate; (b) temperature; (c) water vapour concentration (moisture content). Where practicable, samples must be taken when emissions are expected to be at maximum rates. During the sampling period the following additional information must be gathered: (a) production rate at the time of sampling; (b) number of GEA units operating; (c) operating temperature; (d) reference to the actual test methods and accuracy of the methods.
Agency interest: Water	
Condition number	**Condition**
1-C1	Contaminants must not be released to land.
1-C2	Spillage of all chemicals and fuels must be contained within an on-site containment system and controlled in a manner that prevents environmental harm. NOTE: All petroleum product storage's must be designed, constructed and maintained in accordance with AS 1940 - Storage and Handling of Flammable and Combustible Liquids.
Agency interest: Noise	
Condition number	**Condition**
1-D1	Noise from the ERA must not cause an environmental nuisance at any nuisance sensitive place or commercial place.
1-D2	All noise from activities must not exceed the levels specified in *Table - Noise limits at any nuisance sensitive or commercial place*.

1-D3

When requested by the administering authority, noise monitoring must be undertaken to investigate any complaint of noise nuisance, and the results notified within 14 days to the administering authority. Monitoring must include:

(a) background noise level;

(b) $L_{A\ 10,\ adj,\ 10\ mins}$;

(c) $L_{A\ 1,\ adj,\ 10\ mins}$;

(d) $L_{A\ max,\ adj,\ T}$;

(e) the level and frequency of occurrence of impulsive or tonal noise;

(f) atmospheric conditions including wind speed and direction;

(g) effects due to extraneous factors such as traffic noise; and

(h) location, date and time of recording.

1-D4

The method of measurement and reporting of noise levels must comply with the latest edition of the administering authority Noise Measurement Manual.

Table - Noise limits at any nuisance sensitive or commercial place

Noise level dB(A) measured as	**Monday to Saturday**			**Sundays and public holidays**		
	7am - 6pm	**6pm - 10pm**	**10pm - 7am**	**9am - 6pm**	**6pm - 10pm**	**10pm - 9am**
	Noise measured at a 'nuisance sensitive place'					
$L_{A10,\ adj,\ 10\ mins}$	Bkg + 5	Bkg + 5	Bkg + 0	Bkg + 5	Bkg + 5	Bkg + 0
$L_{A1,\ adj,\ 10\ mins}$	Bkg + 10	Bkg + 10	Bkg + 5	Bkg + 10	Bkg + 10	Bkg + 5
	Noise measured at a 'Commercial place'					
$L_{A10,\ adj,\ 10\ mins}$	Bkg + 10	Bkg + 10	Bkg + 5	Bkg + 10	Bkg + 10	Bkg + 5
$L_{A1,\ adj,\ 10\ mins}$	Bkg + 15	Bkg + 15	Bkg + 10	Bkg + 15	Bkg + 15	Bkg + 10

Agency interest: Social

Condition number	**Condition**
1-E1	The operator of the ERA must record the following details for all complaints received and provide this information to the administering authority on request: (a) time, date, name and contact details of the complainant; (b) reasons for the complaint; (c) any investigations undertaken; (d) conclusions formed; and (e) any actions taken.

PART 2: Common Conditions for:

ERA 53 – Organic material processing

ERA 54 – Mechanical waste reprocessing

ERA 55 – Other waste reprocessing

ERA 61 – Thermal waste reprocessing and treatment

Location: 55 Champions Way WILLOWBANK QLD 4306
Lot 3 on Plan SP167885

The environmentally relevant activities conducted at the location as described above must be conducted in accordance with the following site-specific conditions of approval.

Agency interest: General	
Condition number	**Condition**
2-G1	**Prevent or minimise likelihood of environmental harm** In carrying out the activity to which this approval relates, all reasonable and practical measures must be taken to prevent or minimise the likelihood of environmental harm being caused.
2-G2	**Maintenance of measures, plant and equipment** Any person undertaking an activity to which this approval relates must do all of the following: (a) install and operate all measures, plant and equipment necessary to ensure compliance with the conditions of this approval; (b) maintain all measures, plant and equipment in a proper and efficient condition; and (c) operate such measures, plant and equipment in a proper and efficient manner.
2-G3	**Records** If a condition of this approval requires the person undertaking the activity to which this approval relates to make or keep a record (however described), or prepare a document, the person must do all of the following — (a) keep the record or document at the approved place; (b) keep the record or document in a place that is accessible by all persons engaged in the activity; (c) produce the record or document for inspection by an authorised person or the administering authority for inspection if requested; (d) for each document or record made or created in response to a monitoring requirement, reporting requirement, investigation or incident — keep the record for a minimum of ten (10) years from the date the document is made or created; and (e) if the record of document is sent (in any form) to the administering authority — keep a copy of the document.

	Note: Unless a condition of this approval requires a document to be made or kept in a specific format (e.g. in hardcopy), the *Electronic Transactions (Queensland) Act 2001* applies to the document.
2-G4	**Copy of environmental authority must be kept at approved place** A copy of this environmental authority must be kept at the approved place in hardcopy format.
2-G5	**Site Based Management Plan** The person undertaking the activity to which this approval relates must keep and implement a Site Based Management Plan (SBMP) that provides for the management of the actual and potential environmental impacts resulting from the carrying out of the activity to which this environmental authority relates, and includes the following — (a) the functions and responsibilities of person's engaged in the activity (either by name or position) at the approved place; (b) day-to-day procedures for the management of the activity specifically with respect to the management of aspects of the activity that cause, or may cause, a release of contaminants to the environment; (c) the processes and procedures for handling and storage of chemicals, materials and wastes used in the activity to which this approval relates; (d) obligations for monitoring the operation and performance of plant or equipment associated with the activity, and reporting particular non-compliance to the administering authority under a condition of this approval or otherwise in accordance with any legally imposed duty to notify (however described) under the *Environmental Protection Act 1994*; (e) description of training requirements for all persons engaged in the activity, including general environmental awareness, operational procedures, incident response, reporting and emergency procedures; (f) the location and instruction for the operation and maintenance of all equipment used for clean-up of any spillages; (g) investigation and response protocols to be utilised by persons engaged in the activity in response to any emergency, incident or event (including non-compliance events), the circumstances in which those protocols are to be applied, and describing escalation criteria for such events; (h) the sampling and analysis regimes under the conditions of this approval, identifying the person(s) responsible for taking compliance samples; (i) procedures for dealing with any abnormal situation or operation of the infrastructure used in the activity to which this approval relates (including any release of contaminants to the environment through an uncontrolled release, accident, incident or emergency or any situation or event that indicates non-compliance with the conditions of this approval has occurred or may occur); and (j) response procedures for employees undertaking the activity arising from any emergency, incident or event (including any abnormal operating condition or circumstance observed or recorded in connection with the activity), including any protocols for the investigating any potential environmental harm arising from such emergencies, incidents or events.
2-G6	The person undertaking the activity to which this approval relates must review the SBMP annually to ensure that it remains current, is consistent with the conditions of this environmental authority, and reflects contemporary practice at the approved place, and a record of the review kept at the approved place.

2-G87	The person undertaking the activity to which this approval relates must give the administering authority a copy of the SBMP — (a) within three (3) months after this environmental authority takes effect; and (b) if the SBMP in paragraph (a) is amended or replaced — within fourteen (14) days of the SBMP being amended or replaced. ***Note:*** This requirement may be satisfied by giving the administering authority a copy of the SBMP in electronic format.
2-G8	The person undertaking the activity to which this approval relates must ensure the SBMP is kept in hardcopy format at the approved place.
2-G9	**Equipment Calibration** All instruments, equipment and measuring devices used for measuring or monitoring in accordance with any condition of this approval must be calibrated and operated and maintained in accordance with operator's instructions or manual.
2-G10	**Monitoring** A competent person(s) must conduct any monitoring required by this approval.
2-G11	**Annual Monitoring Report** An annual monitoring report, which includes the following information, must be prepared and submitted once in each period of one (1) year, within one (1) month of the anniversary date, in hardcopy format (or another format approved by the administering authority) to the administering authority — (a) a summary of the previous twelve (12) months monitoring results obtained under any monitoring programs required under this approval and, in graphical form showing relevant limits, a comparison of the previous twelve (12) months monitoring results, prior results and relevant recognised standards or guidelines; (b) an evaluation and explanation of the data from any monitoring programs; (c) a summary of any record of quantities of releases required to be kept under this approval; (d) a summary of the record of equipment failures or events recorded for any site under this approval made under condition 2-G16(a); and (e) an outline of actions taken or proposed to minimise the environmental risk from any deficiency identified by the monitoring or recording programs. ***Note:*** The annual monitoring report should include information for all monitoring that occurs within the annual period. Monitoring data that is submitted to electronically to the administering authority in accordance with condition 2-G11 does not need to be re-submitted in hardcopy format with the annual report. Submission of monitoring data in electronic format does not alleviate the obligation to notify the administering authority of any specific non-compliance required under another condition of this approval. Also, note that monitoring data may be supplied to another person, including a third party.

2-G12	**Notification of Certain Releases or Events to be Supplied to the Administering Authority** The person undertaking the activity to which this approval relates must notify the administering authority as soon as practicable after becoming aware of any event mentioned in condition 2-G13 unless one (1) or more of the following applies — (a) the administering authority has been given notice of the event under any statutorily imposed duty to notify under the *Environmental Protection Act 1994*; (b) the event is done in compliance with an emergency direction or a statutory notice or obligation under the *Environmental Protection Act 1994* given or issued to the person; or (c) the administering authority waives, in writing, the requirement to give such notification for the specific event or release.
2-G13	For condition 2-G12, the events are any such events that are one (1) or more of the following — (a) any event which results in the release of contaminants not in accordance, or reasonably expected to be not in accordance with the conditions of this environmental authority arising from the activity to which this approval relates; (b) any malfunctions or failure in pollution control equipment that results in the release of contaminants not in accordance, or reasonably expected to be not in accordance with the conditions of this environmental authority arising from the activity to which this approval relates; (c) any fire, explosion, accident or failure in any chemical or waste storage area or involving any chemical delivery system or waste resulting in a discharge of contaminants to land, waters or air (even if the contamination is contained within the approved place); or (d) any act of malicious damage to the waste treatment facilities or associated infrastructure that may result in failure in one (1) or more treatment processes or equipment at the site or may cause a release of contaminants contrary to conditions of this approval.
2-G14	If the person undertaking the activity to which this approval relates is required to give notification to the administering authority of an event under condition 2-G12, the notification must include the following information — (a) the name of the holder of the registration certificate under which the activity to which this environmental authority relates is being undertaken; (b) the registration certificate number; (c) the environmental authority number; (d) the name and telephone number of the designated contact person who is able to talk with the administering authority on behalf of the operator in relation to the event; (e) the location of the event including a physical address and lot on plan description (if available) and any other information necessary to identify the specific location of the event; (f) the time of the event (if known); (g) the time the person became aware of the event; (h) the suspected cause of the event;

	(i) the environmental harm or environmental nuisance caused or threatened, or suspected to be caused or threatened by the event; (j) if the event has impacted, or may impact on, a person's land – whether the person whose land has been, or may be, impacted by the event or release has been notified; (k) if the event involves a chemical – the name of the chemical and any known information about the chemical including its environmental toxicity; (l) if the event involves a waste – the type of waste and any known information about the waste including its source, contaminants, and environmental toxicity; and (m) any immediate actions taken to mitigate any environmental harm or environmental nuisance caused or threatened, or suspected to be caused or threatened by the event. ***Note:*** The administering authority's Pollution Hotline (Telephone Number – 1300 130 372) is the most appropriate contact for reporting pollution events or incidents. This condition can be satisfied by supplying the information either verbally or in writing.
2-G15	If the person undertaking the activity to which this approval relates is required under condition 2-G12 to notify the administering authority of an event or release, the person must, within fourteen (14) days of the event, give the administering authority a written notice that includes the following information — (a) the information included in the notification supplied under condition 2-G14, including any updates or changes to that information of which the person has become aware as a result of any incident response or investigation; (b) the identified cause of the event; (c) if the event involved a chemical – a material safety data sheet (MSDS) for the chemical; (d) if the event involved a waste – contaminants and level of contamination for the waste; (e) a description of any observed effects on the environment of the event and any anticipated long-term impacts; (f) the full analysis results of any environmental sampling performed in relation to the event; (g) actions taken to mitigate any environmental harm (including environmental nuisance) caused by the event; (h) proposed actions to be taken to prevent a recurrence of the event; (i) proposed subsequent environmental sampling in relation to the event; and (j) that the written advice is submitted under a condition of an environmental authority. ***Note:*** This statement differentiates a notification made under a condition of this approval and a notification made under a statutorily imposed duty under the *Environmental Protection Act 1994*.

2-G16	The person undertaking the activity to which this approval relates must make a record of the following events — (a) the time, date and duration of equipment malfunctions or failure where the malfunction or failure results in the release of contaminants to the environment not in accordance with the conditions of this approval; (b) any uncontrolled release of contaminants, including an estimate of the volume of contaminants released in the event; (c) any fire at the place to which this approval relates; (d) any release of leachate or stormwater runoff which has been in contact with any wastes or contaminants not likely to be in accordance with the conditions of this environmental authority to waters; and (e) incidents which have adverse public health consequences or cause nuisance including time, date, duration and nature of the incident.
2-G17	**Spills** Any spillage of wastes, regulated waste or contaminants must be cleaned up as soon as practicable after the spillage event.
2-G18	All spillages of wastes, regulated waste, or contaminants must be contained as soon as practicable and disposed of at a facility that can lawfully accept such waste.
2-G19	**Spill Kit** An appropriate spill kit(s), protective equipment and relevant instructions and emergency procedures or guidelines for the management of wastes, regulated wastes and chemicals associated with the activity to which this approval relates must be available to any person undertaking the activity on site at all times.
2-G20	**Spill Kit Training** Any person engaged in the activity to which this approval relates must be trained in the use of the spill kit and the emergency guidelines.
2-G21	**Trained and Experienced Operator(s)** The daily operation of the waste treatment facility and any associated pollution control equipment must be carried out by a person(s) with appropriate experience or qualifications to ensure the effective operation of that treatment facility and pollution control equipment.
2-G22	All determinations of the waste acceptance criteria for waste received at the waste treatment facility must be performed by a person(s) with appropriate experience or qualifications to perform the required determinations.
2-G23	**Supervision of Activity** The person undertaking the activity to which this approval relates must ensure that at all times while the activity is operating — (a) at least one (1) person is present and whose duties include — (i) supervising any persons entering the facility;

	(ii) supervising the receipt, storage, treatment and removal of waste; and (iii) monitoring compliance with the waste acceptance criteria. (b) at least one (1) person must be responsible and contactable concerning the management of the facility and whose duties include — (i) managing any persons working in the facility; (ii) managing any events, emergencies or incidents that may occur; and (iii) maintaining the facility to an appropriate environmental standard.
2-G24	**Site Security** A minimum two (2) metre high wire mesh fence with lockable gate(s) must be erected around the perimeter of the place to which this approval relates.
2-G25	All access gates must be locked when the place to which this approval relates is closed for business.
2-G26	Appropriate signs indicating that unlawful entry is prohibited must be prominently displayed at the place to which this approval relates.
2-G27	**Public Health Issues** Any person undertaking an activity to which this approval relates must take all measures, perform all acts and do all things to ensure that the carrying out of the activity does not cause any adverse effect on public health or any nuisance.
2-G28	The person undertaking an activity to which this approval relates must use all lawful and practicable means to exclude access of birds, dogs and other pest species to that extent necessary to ensure that such birds, dogs and pest species do not cause any of the following— (a) environmental nuisance to occupiers of neighbouring premises; (b) any nuisance or danger to aircraft; (c) any danger or risk to the health of any persons; or (d) environmental harm. ***Note***: Approvals may be required under other legislation such as the *Nature Conversation Act 1992*.
2-G29	In the event of any adverse effect upon public health or any environmental nuisance arising from the activity, any person undertaking an activity to which this approval relates must do all such acts and things and carry out any such works as may be necessary to — (i) abate such adverse effects and such nuisance; and (ii) prevent the likelihood of any recurrence of the circumstances which gave rise to such adverse effects or such nuisance.
2-G30	**Complaint Response** The person undertaking an activity to which this approval relates must record the following details for all complaints received —

	(a) time and date the complaint was received; (b) method of communication used for complaint received (i.e. telephone, email, letter, and in person); (c) name and contact details (i.e. address, telephone number(s), and email address) of the complainant; (d) time and date of the event giving rise to the complaint; (e) nature and source of the complaint; (f) basis and details of the complaint; (g) any investigations undertaken, date investigations were undertaken and name of the responsible person; (h) any conclusions formed; and (i) any actions taken or proposed to be taken, date actions taken or proposed to be taken and name of the responsible person.
2-G31	**Notification of Commencement of Activity and Commissioning** The person undertaking the activity to which this approval relates must notify the administering authority in writing within five (5) business days prior to each of the following events — (a) commencement of the works to prepare the place for the carrying out of each activity; (b) carrying out of each activity (i.e. the initial receipt of materials or waste for treatment); and (c) commencing the commissioning period for the indirect thermal desorption unit.
2-G32	Unless agreed in writing with the administering authority, the commissioning period for the indirect thermal desorption unit must not exceed four (4) months.
2-G33	The person undertaking the activity which this approval relates must notify the administering authority in writing within five (5) business days of completing the commissioning period for the indirect thermal desorption unit.
2-G34	**Conforming to Plans** The location and layout of the site for the activities to which this approval relates must conform to all of the following — (a) the plan titled Ti Tree Bioenergy Facility Proposed Waste Treatment Facility Site Plan, Drawing Number TT645-00-01, Revision F, comprising Attachment 1 of this approval; (b) the plan titled Ti Tree Bioenergy Facility Proposed Waste Treatment Facility Earthworks Layout Plan, Drawing Number TT645-00-03, Revision F, comprising Attachment 2 of this approval; (c) the plan titled Ti Tree Bioenergy Facility Proposed Waste Treatment Facility Miscellaneous Details, Drawing Number TT645-00-05, Revision D, comprising Attachment 3 of this approval; and (d) the plan titled Ti Tree Bioenergy Facility Proposed Waste Treatment Facility Stormwater Management Plan, Drawing Number TT645-00-08, Revision D, comprising Attachment 4 of this approval.

2-G35	**Fire Emergency Plan** The person undertaking the activity to which this approval relates must have a Fire Emergency Plan for the site that includes all of the following — (a) defines the scale of fire emergencies covered under the plan; (b) specifies relevant statutory requirements; (c) specifies reporting procedures to the relevant authorities in the event of a fire emergency; (d) outlines the functions and responsibilities of person's engaged in the activity (either by name or position) during a fire emergency; (e) stipulates the type of equipment and resources that exists on the site for the response to fire emergency incidents; (f) stipulates a maintenance protocol for the equipment referred to in paragraph (e); (g) stipulates the resources that must be made available for responding to fire emergencies; (h) describes liaison protocol with external providers; (i) describes containment and clean-up strategies; and (j) provides a reporting mechanism for corrective actions.
2-G36	**Flood Line Immunity** All structures associated with the waste treatment facility must be constructed in a way that achieves 1 in 100 year (Q100) flood line immunity.
2-G37	**Acceptance and Treatment of Waste** The person undertaking the activity to which this approval relates must ensure that the quantity of materials and wastes located on each waste storage and treatment cell depicted on the plan titled Ti Tree Bioenergy Facility Proposed Waste Treatment Facility Earthworks Layout Plan, Drawing Number TT645-00-03, Revision F, comprising Attachment 2 of this approval does not exceed the following at any point in time— (a) bioremediation waste storage and treatment cell — 1,600 tonnes; (b) chemical fixation and acid and alkali neutralisation waste storage and treatment cell (i) 3,000 tonnes of solids; (ii) 65,000 litres of liquids; (c) composting and soil conditioning waste storage and treatment cell — 3,300 cubic metres; and (d) indirect thermal desorption waste storage and treatment cell — 4,000 tonnes.
2-G38	**Financial Assurance** The registered operator must provide and maintain financial assurance in favour of the State of Queensland in the form of an irrevocable, unconditional and on demand bank guarantee to meet the following requirements — (a) thirty (30) business days prior to the acceptance of any waste for bioremediation a financial assurance of $320,000 (three hundred and twenty thousand dollars); and

	(b) thirty (30) business days prior to the acceptance of any waste for chemical stabilisation or fixation a financial assurance of $600,000 (six hundred thousand dollars); and (c) thirty (30) business days prior to the acceptance of any waste acid or alkali solutions a financial assurance of $25,000 (twenty-five thousand dollars); and (d) thirty (30) business days prior to the acceptance of any waste for composting and soil conditioner manufacturing a financial assurance of $130,000 (one hundred and thirty thousand dollars); and (e) thirty (30) business days prior to the acceptance of any waste for indirect thermal desorption a financial assurance of $800,000 (eight hundred thousand dollars).
2-G39	Financial assurance security in accordance with condition2-G38 of this approval must be maintained until the administering authority is satisfied that no claim is likely to be made on the assurance and in excess of any claims made in respect of such financial assurance under the provisions of the *Environmental Protection Act 1994*.
2-G40	A certificate or certificates of insurance covering third party liability and for sudden and accidental events that result in environmental harm or nuisance must be maintained and provided to the administering authority. The sum or sums so insured must equal or exceed five million dollars ($5,000,000) for public liability and forty million dollars ($40,000,000) to cover environmental pollution arising from activities that are the subject of this environmental authority.
2-G41	Proof of any payments towards the maintenance of the financial assurance security(s) and the relevant financial assurance certificates must be submitted to the administering authority with each Annual Return.
2-G42	**Annual Performance Report** An annual performance report which includes the following information, must be prepared and submitted to the administering authority once in each period of one (1) year, within one (1) month of the annual return date, in hardcopy format (or another format approved by the administering authority) — (a) compliance with conditions of this approval; (b) any identified areas for improvement in performance, procedures or records; and (c) timeframes for when improvements are to be implemented.
2-G43	**Third Party Auditing of Compliance with Conditions of Approval** The person undertaking the activity to which this approval relates must ensure that an audit of compliance with the conditions of this approval is undertaken once every three (3) years, by a suitably qualified third party auditor who is nominated by the person undertaking the activity to which this approval relates and accepted by the administering authority.
2-G44	The person undertaking the activity to which this approval relates must submit to the administering authority a complete and final report prepared by the auditor (the "auditor's report") mentioned in condition 2-G43 describing the auditor's findings and accompanied by a statutory declaration made under the *Oaths Act 1867* signed by the auditor declaring that the contents of the auditor's report are true and correct to the auditor's belief, within twenty-eight (28) days after the audit is completed.

2-G45	If the auditor's report submitted under condition 2-G44 shows non-compliance with the conditions of this approval, the person undertaking the activity to which this approval relates must, within fourteen (14) days after giving the auditor's report to the administering authority, give the administering authority a complete and final report — (a) describing the person's response to the findings stated in the auditor's report; (b) describing the actions that the person will undertake to rectify each non-compliance issue identified in the auditor's report; and (c) if the action(s) mentioned in paragraph (b) will take more than twenty-eight (28) days to complete – describing the timeframes by which the action will be completed and specifying benchmarks against which compliance with the conditions of the approval will be achieved.
2-G46	The financial cost of the audit(s), and preparation and lodgement of the auditor's report will be the responsibility of the person undertaking the activity to which this approval relates.
2-G47	If the person undertaking the activity to which this approval relates gives the administering authority a report to which condition 2-G 45(c) applies, the person must comply with the timeframes specified in the report.
2-G48	If condition 2-G45(c) applies, the administering authority may, at the end of the timeframes specified in the report, by written notice, require the person undertaking the activity to which this approval relates to submit a further auditor's report prepared by the same auditor in accordance with conditions 2-G43–2-G45 and the person must comply with the requirement forthwith.
Agency interest: Air	
Condition number	**Condition**
2-A1	**Release of Dust or Particulate Matter** The release of dust or particulate matter resulting from the activity to which this approval relates must not cause, or be likely to cause, an environmental nuisance at or beyond the boundary of the approved place.
2-A2	The dust deposition rate and concentration of PM_{10} and PM_{TSP}, at or beyond the boundary of the approved place, must not exceed the limits specified in *Table – Dust and Particulate Matter* for the contaminant when measured in accordance with the measurement method specified in *Table – Dust and Particulate Matter*.

Table – Dust and Particulate Matter

Contaminant	Measure	Limit	Measurement Method
Dust	Deposition rate	120 $mg/m^2/day$	Australian Standard AS3580.10.1 of 2003 (or more recent editions)
PM_{10}	Concentration	50 $\mu g/m^3$ averaged over 24 hours	Either of the following —

				(a) AS3580.9.6 of 2003 (or more recent editions); or (b) AS3580.9.7 of 2008 (or more recent editions).
	Total Suspended Particulates (PM_{TSP})	Concentration	100 µg/m^3 averaged over 24 hours	Australian Standard AS/NZ3580.9.3.2003 (or more recent editions)

Note:

- Australian Standard AS3580.9.6 of 2003 (or more recent editions) Ambient Air – Particulate matter – Determination of suspended particulate matter PM_{10} high volume sampler with size selective inlet – Gravimetric method.
- Australian Standard AS3580.9.8:2008 (or more recent editions) Methods for sampling and analysis of ambient air – Determination of suspended particulate matter – PM10 continuous direct mass method using tapered element oscillating microbalance (TEOM) analyser.
- Australian Stand AS/NZ3580.9.3.2003 (or more recent editions) Methods for sampling and analysis of ambient air method 9.3: Determination of suspended particulate matter – Total suspended particulate matter (TSP) – High volume sampler gravimetric method.
- Any alternative method of monitoring which may be permitted by the 'Air Quality Sampling Manual' as published from time to time by the administering authority.

2-A3	Despite condition 2-G2, the person undertaking the activity to which this approval relates is required to install equipment to measure the dust deposition rate or the concentration of particulate matter (PM_{10} or PM_{TSP}) for condition 2-A2 only if directed in writing by the administering authority to undertake monitoring for those contaminants.
2-A4	**Dust and Particulate Matter Control – Trafficable Areas** Trafficable areas must be sealed with bitumen or suitable material that has been consolidated so dust is not emanated by vehicle movements.
2-A5	The surface of trafficable areas must be kept clean.
2-A6	**Dust and Particulate Matter Control – Dust Suppression** The only materials to be used for dust suppression are — (a) uncontaminated water; and (b) water collected in a stormwater control area as a result of stormwater runoff only.
2-A7	Water used for dust suppression as described in condition 2-A6(b) must only be used in the same waste storage and treatment cell from where the stormwater was collected and stored.
2-A8	A water cart or water sprays must be located on site for the wetting down of trafficable areas and stockpiles of materials and waste.
2-A9	**Release of Noxious or Offensive Odours**

	The release of noxious or offensive odours, or any other noxious or offensive airborne contaminants, resulting from the activity to which this approval relates must not cause, or be likely to cause, a nuisance at or beyond the boundary of the approved place.
2-A10	**Reasonable Adjustment of Practices, Procedures or Infrastructure for Resolving Odour Nuisance Complaints** The person undertaking the activity to which this approval relates must investigate, or commission the investigation of, any complaints of nuisance caused by noxious or offensive odours upon receipt, or upon referral of a complaint received by the administering authority and, if those complaints are validated, make reasonable adjustments to processes or equipment to prevent a recurrence of odour nuisance.
2-A11	**Odour Monitoring Obligations** The person undertaking the activity to which this approval relates must, if directed in writing by the administering authority, undertake or commission the undertaking of odour monitoring for contaminants released from the approved place and places relevant to ascertaining the level, nature and source of odour nuisance at the affected premises.
2-A12	A weather station must be installed, operated, calibrated and maintained on site which continuously and electronically records: (a) Rainfall (mm/day); and (b) Wind speed (km/hour); and (c) Wind direction (cardinal direction, e.g. north-easterly); and (d) Air temperature (degrees Celsius); and (e) Relative humidity (%).
2-A13	The weather station required by condition 2-A12 must be installed in compliance with the Australian/New Zealand Standards: (a) AS/NZS 3580.1.1: 2016 (Methods for sampling and analysis of ambient air – Guide to siting air monitoring equipment) or, if a more recent version or replacement of that standard has been released, in accordance with the more recent or replaced standard; and (b) AS 3580.14:2014 (Methods for sampling and analysis of ambient air – Meteorological monitoring for ambient air) or, if a more recent version or replacement of that standard has been released, in accordance with the more recent or replaced standard.
Agency interest: Land	
Condition number	**Condition**
2-L1	**Releases to Land** Contaminants must not be released to land beyond the waste storage and treatment cells depicted on the plan titled Ti Tree Bioenergy Facility Proposed Waste Treatment Facility Earthworks Layout Plan, Drawing Number TT645-00-03, Revision F, comprising Attachment 2 of this approval.

2-L2	**Erosion Control** Erosion protection and sediment control measures must be implemented and maintained to minimise erosion and the release of sediment from the activity at the place to which this approval relates.
2-L3	**Waste Storage and Treatment Cell Liner System** Each waste storage and treatment cell must have a constructed liner system that complies with all of the following and as depicted in the plan titled Ti Tree Bioenergy Facility Proposed Waste Treatment Facility Miscellaneous Details, Drawing Number TT645-00-05, Revision D, comprising Attachment 3 of this approval — (a) 200 millimetre (mm) of compacted gravel surface; (b) underlain by a geotextile marker to indicate when the gravel surface has been worn down and requires maintenance; (c) underlain by 900 millimetre (mm) of compacted clay with a hydraulic conductivity of 10^{-9} metres per second (m/s) or less; (d) underlain by 1 metre (m) of site material compact to ninety eight per cent (98%) relative dry density; and (e) underlain by a high strength woven geotextile that meets the specifications in *Table – Geotextile Properties*. **Table – Geotextile Properties**

Property	Unit	Minimum Value
Trapezoidal Tear Strength	N	700
CBR Bust Strength	N	4500
G Rating	G	3600
Grab Tensile Strength	N	1900

Agency interest: Noise	
Condition number	**Condition**
2-N1	**Noise Nuisance** The person undertaking the activity to which this approval relates must not cause or permit noise to be emitted from the activity to which this approval relates if the noise causes, or is likely to cause, environmental nuisance at or beyond the boundary of the approved place.
2-N2	**Noise Limits and Monitoring** The sound pressure level dB(A) from the activity to which this approval relates, but excluding noise from building works associated with the activity, must not exceed the maximum compliance limit specified in the following table when measured using the acoustic descriptor, and at the location, specified in *Table – Noise Limits*. **Table – Noise Limits**

<table>
<tr><td></td><td>
<table>
<tr><th rowspan="2">Sound Pressure Level dB(A) Measurement</th><th rowspan="2">Location of Measurement</th><th colspan="3">Maximum Compliance Limit dB(A)</th></tr>
<tr><th>Monday to Friday
7am - 6pm</th><th>Saturday
7am - 2pm</th><th>Public Holidays (except Sundays)
8am - 6pm</th></tr>
<tr><td>$L_{Aeq, 10\ mins}$</td><td>At or beyond the boundary of the approved place</td><td>55</td><td>50</td><td>50</td></tr>
</table>
<u>Note:</u> Section 440R of the Environmental Protection Act 1994 limits the hours at which building work causing an audible noise may be undertaken, and applies to building work undertaken as part of the activity to which this approval relates.
</td></tr>
<tr><td>2-N3</td><td>Administering Authority may Require Noise Monitoring to be Undertaken
If directed by the administering authority, noise monitoring, which addresses the following issues, must be undertaken to investigate any complaint of noise nuisance, and the results of the monitoring given or sent to the administering authority or an authorised person within fourteen (14) days of the completion of the monitoring —
(a) background noise;
(b) $L_{A10, adj, 10\ mins}$;
(c) $L_{A1, adj, 10\ mins}$;
(d) $L_{Aeq, adj, 10\ mins}$;
(e) the level and frequency or occurrence of impulsive or tonal noise;
(f) atmospheric conditions including wind speed and direction;
(g) effects due to extraneous factors such as traffic noise; and
(h) location, date and time of recording.</td></tr>
<tr><td>2-N4</td><td>The method of measurement and reporting of noise levels must comply with the latest edition of the administering authority’s Noise Measurement Manual.</td></tr>
<tr><td>2-N5</td><td>Obligation to Investigate Complaints of Noise Nuisance
Subject to condition 2-N6, the person undertaking the activity to which this approval relates must investigate, or commission the investigation of, all complaints alleging noise nuisance from the activity to which this approval relates.
<u>Note:</u> The form of any investigations made under condition 2-N5 should be sufficient to enable a conclusion about the validity of the complaint to be made, but do not necessarily require formal noise monitoring in the form required under condition 2-N3.</td></tr>
<tr><td>2-N6</td><td>The obligation for the person undertaking the activity to which the approval relates to investigate a nuisance complaint is extinguished if all the following apply —
(a) the facts and circumstances forming the basis for the complaint are substantially the same as those alleged in a former complaint by the same complainant;
(b) the results of an investigation into the former complaint was that the complaint cannot be substantiated; and</td></tr>
</table>

	(c) the administering authority or an authorised person has not, by written notice, otherwise revived the obligation to investigate the complaint.
2-N7	**Reasonable Adjustment for Validated Nuisance Complaints** The person undertaking the activity to which this approval relates must make reasonable adjustment of practices, procedures or equipment to resolve any validated complaint investigated under condition 2-N5. Examples of a reasonable adjustment include — (a) changing the times of the day at which particular actions giving rise to the complaint happen; (b) replacing acoustic housing of equipment; (c) enclosing, covering or closing open or exposed infrastructure if enclosing, covering or closing the infrastructure would not compromise or reduce its effectiveness; or (d) installing noise attenuation equipment to machinery. ***Note:*** See section 319 of the *Environmental Protection Act 1994* (General environmental duty) for things that must be considered in determining whether a change is a reasonable adjustment.
Agency interest: Water	
Condition number	**Condition**
2-WT1	**General** Except as otherwise provided by the conditions of this approval, the activity must be carried out by such practicable means necessary to prevent the contact of incident rainfall and stormwater runoff with wastes or other contaminants.
2-WT2	**Release to Waters** Contaminants must not be released to any waters or the bed and banks of any waters, including groundwater.
2-WT3	**Maintenance and Cleaning of Vehicles and Equipment** The maintenance and cleaning of vehicles or other equipment must be carried out in designated areas from where the contaminants cannot be released into any stormwater drainage system, roadside gutter or waters.
2-WT4	**Bunding** All chemical, fuel and waste tank storages must be bunded so that the capacity of the bund is sufficient to contain at least one hundred per cent (100%) of the largest storage tank plus ten per cent (10%) of the second largest tank within the bund.
2-WT5	All chemical, fuel and waste drum storages must be bunded so that the capacity of the bund is sufficient to contain at least twenty five per cent (25%) of the total design storage volume within the bund.

2-WT6	All tanker loading and unloading areas must be bunded so that the capacity of the bund is sufficient to contain one hundred per cent (100%) of the largest compartment of any tanker using the area.
2-WT7	All bunding must be constructed of materials which are impervious to the chemical, fuel and waste stored within it.
2-WT8	All bunding must be maintained in a serviceable condition and must not be compromised by gaps, cracks or other damage.
2-WT9	All fixed chemical, fuel and waste tank and drum storage areas (excluding the acid and alkali neutralisation, pre-treatment and precipitation tanks described in conditions 2-W18 and 2-W19) must be roofed.
2-WT10	Where vehicle access to a bunded area is required, the access must be by way of a rollover bund.
2-WT11	All empty chemical, fuel and waste drums must be stored with their closures in place.
2-WT12	A collection sump must be provided in the floor of all bunding to facilitate the removal of liquids.
2-WT13	The floor of all bunding must be graded so that the fall is towards a collection sump.
2-WT14	The person undertaking the activity to which this approval relates must ensure that any stormwater captured within a bunded area is free of contaminants or wastes prior to any release.
2-WT15	**Waste Storage and Treatment Cells** Each waste storage and treatment cell must be constructed and bunded as depicted in the plan titled Ti Tree Bioenergy Facility Proposed Waste Treatment Facility Miscellaneous Details, Drawing Number TT645-00-05, Revision D, comprising Attachment 3.
2-WT16	There must be no pooling or ponding of leachate and stormwater runoff on the surface of any waste storage and treatment cell.
2-WT17	Each waste storage and treatment cell must be graded to collect and convey, leachate and stormwater runoff, to a stormwater control area as depicted in the plan titled Ti Tree Bioenergy Facility Proposed Waste Treatment Facility Stormwater Management Plan, Drawing Number TT645-00-01, Revision D, comprising Attachment 4.
2-WT18	Contained treatment pad runoff water must only be used in the same waste storage and treatment cell from where the water was collected and stored.

2-WT19	**Stormwater Control Dam** The stormwater control dam depicted in the plan titled Ti Tree Facility Proposed Waste Treatment Facility Stormwater Management Plant, Drawing Number TT645-00-08, Revision D, comprising Attachment 4, must be installed and maintained to prevent any release of the stored contaminants or wastes through the bed or banks of the stormwater control dam to any waters (including groundwater).
2-WT20	The size of the stormwater control dam for the collection of leachate and stormwater runoff from the waste storage and treatment cells must be sufficient to contain the runoff expected from a twenty four (24) hour storm with an average recurrence interval (ARI) of one (1) in ten (10) years.
2-WT21	A freeboard of not less than 0.5 metres (m) must be maintained in the stormwater control dam.
2-WT22	The water height in the stormwater control dam must be recorded daily.
2-WT23	The stormwater control dam must be desilted whenever the volume of the dam is reduced by thirty per cent (30%).
2-WT24	The stormwater control dam must be managed after each rainfall event so that the holding capacity is reinstated in readiness for the next rainfall event.
2-WT25	The concentration of dissolved oxygen in the stormwater control dam must be maintained at a minimum of 3.0 mg/L.
2-WT26	The person undertaking the activity to which this approval relates must monitor and keep a record of the concentration of dissolved oxygen in the stormwater control dam daily.
2-WT27	Water contained in the Stormwater Control Dam depicted in the plan titled Ti Tree Facility Proposed Waste Treatment Facility Stormwater Management Plant, Drawing Number TT645-00-01, Revision D, comprising Attachment 4 of this approval, must not be used for any purpose at the place to which this approval relates, unless — (a) a comprehensive and representative analysis of the water in the Stormwater Control Dam is provided to the administering authority; and (b) a management plan is provided to the administering authority specifying the total volume of water in the Stormwater Control Dam and its proposed use; and (c) a written approval to use the water is granted by the administering authority.
2-WT28	**Erosion and Sediment Control** Erosion and sediment controls must be — (a) designed and installed to minimise erosion; (b) designed and installed to minimise surface flow velocities;

	(c) designed and installed to divert surface waters away from the waste storage and treatment cells used for the storage and treatment of material and wastes; (d) designed and installed to prevent a release of sediments from the approved place; and (e) checked, repaired or replaced as required after each rainfall event to achieve compliance with condition 2-WT28(a) to (d).
2-WT29	**Truck and Wheel Wash Facility** A wheel wash facility must be installed, maintained and operated to remove waste, stones, soil and clay from the wheels of vehicles using the facility.
2-WT30	Any vehicles leaving the site must not track mud or other materials onto roads beyond the approved place.
2-WT31	Wastewater generated by washing waste transport vehicles (including any trailers towed by other vehicles) and by the wheel washing facility must be disposed of to a facility that can lawfully accept such waste.
2-WT32	Sediments and sludges collected in the wheel washing facility must be dewatered and disposed of to a facility that can lawfully accept such waste.
2-WT33	**Waste Storage** Any waste residues arising from activity to which this approval relates must be stored to prevent stormwater ingress.
Agency interest: Waste	
Condition number	**Condition**
2-W1	**General** Waste generated in the carrying out of the activity to which this approval relates must be stored, handled and transferred so as to prevent release of contaminants to land, waters or air.
2-W2	The person undertaking the activity to which this approval relates must not — (a) burn waste at the place to which this approval relates; or (b) allow waste to burn, or be burnt, at the place to which this approval relates.
2-W3	**Receival of Wastes and Materials** The person undertaking the activity to which this approval relates must take actions to ensure that all regulated wastes transported to the approved place are transported only by a person who is lawfully entitled to transport the waste. ***Note:*** The generator of waste is responsible for giving particular information ("the prescribed information") to the transporter, including the location where the waste is to be taken. Therefore, the generator of waste also assumes

	responsibility under law for ensuring that the proposed receiver of the waste also has the required approvals for receipt and processing, recycling or recovery of a resource from the waste or the disposal of the waste.
2-W4	All regulated waste must be stored, treated, or reprocessed only within the waste storage and treatment cells depicted on the plan titled Ti Tree Facility Proposed Waste Treatment Facility Earthworks Layout Plan, Drawing Number TT645-00-03, Revision F, comprising Attachment 2.
2-W5	Each delivery of waste or material must be inspected prior to acceptance at the approved place to ensure the waste or material is only of a type permitted by the conditions of this approval.
2-W6	The person undertaking the activity to which this approval relates must verbally notify the administering authority as soon as practicable after becoming aware of any waste or material delivered to the approved place that is not permitted by the conditions of this approval.
2-W7	The person undertaking the activity to which this approval relates must only receive contaminated soil at the place to which this environmental authority relates if its removal from its original source is subject to a lawful disposal permit.
2-W8	Each delivery of waste or materials stored and treated at the approved place must be identifiable with a unique number.
2-W9	The person undertaking the activity to which this approval relates must develop and implement a waste and material database to daily record the following for each delivery of waste or material accepted at the approved place — (a) the unique numbering system specified in condition 2-W8**;** (b) the date and time of acceptance of the waste or material at the approved place; (c) the type, description (including ANZECC code) and composition of the waste or material; (d) the date, methodology and results of sampling undertaken to establish contaminant concentrations (if relevant) prior to and upon acceptance at the approved place; (e) the source of the waste or material; (f) the quantity of the waste or material; (g) the details of the transporter including name, address, phone, vehicle registration number, lawful transportation permit and waste tracking details; (h) the treatment process to be utilised; (i) any observations made about the waste or material when accepted or during treatment; (j) the date treatment commenced; (k) the date, methodology and results of sampling undertaken to validate the completion of treatment and waste acceptance criteria for disposal at a facility that can lawfully accept the waste; and (l) the fate of the treated waste.
2-W10	**Waste Loading and Unloading**

	Oversized containers must be available at the approved place at any time to contain wastes from any drums which are found to be leaking, damaged or corroded
2-W11	The person undertaking the activity to which this approval relates must transfer any leaking waste container into an oversize container or a bunded area impervious and compatible to the waste stored immediately upon receipt of the waste.
2-W12	All loading and unloading of wastes must take place in bunded areas.
2-W13	All transfer of wastes from drums to waste storage and treatment cells or treatment process vessels must be undertaken in bunded areas.
2-W14	The person undertaking the activity to which this approval relates must ensure that equipment is available for containment and recovery of any spillages at the loading and unloading points.
2-W15	**Waste Treatment - General** The person undertaking the activity to which this approval relates must not cause or permit the mixing of incompatible wastes (except as permitted by condition 4-W15**.**
2-W16	All wastes and materials specified in the conditions of this approval must be unloaded, stored, treated, or reprocessed only within the waste storage and treatment cells at the approved place.
2-W17	**Off Site Movement of Regulated Waste** Any waste residues arising from the activity to which this approval relates must be stored to prevent stormwater ingress.
2-W18	Each container of regulated waste stored awaiting movement off-site must be marked to identify the waste contained therein.
2-W19	Before loading of the regulated waste for removal, the person undertaking the activity to which this approval relates must advise the transporter of the nature of the waste, hazards associated with the waste and any precautions which need to be taken during the collection, transportation or disposal of the said waste.
2-W20	**Green waste Stockpiles** The temperature of any green waste stockpile must not exceed 67°C.
2-W21	The temperature profile of all green waste stockpiles must be monitored and recorded once in every period of seventy two (72) hours.
2-W22	**Waste Storage and Treatment Cells** Waste must only be stored on the waste storage and treatment cell, where the treatment process will be undertaken.

2-W23	**Covering of Waste Stockpiles** Tarpaulins and plastic sheeting used to cover stockpiles of waste or materials must be secured in place.

Part 3: Conditions for ERA 53(a) – Organic Material Processing

Location: 55 Champions Way WILLOWBANK QLD 4306
Lot 3 on Plan SP167885

The environmentally relevant activity conducted at the location as described above must be conducted in accordance with the following site-specific conditions of approval.

Agency Interest: General	
Condition number	**Condition**
3-G1	**Windrow Size** Windrows and biopiles for composting and soil conditioner manufacturing must be less than five (5) metres in width and have a maximum height of four (4) metres.
3-G2	Despite condition 3-W1. prohibited material or feedstock containing prohibited material must not be used in composting.
3-G3	All plans required by the conditions of Part 3 of this environmental authority must be: (a) Developed and endorsed in writing as being compliant with the conditions of this environmental authority by an appropriately qualified person; and (b) Implemented in accordance with the requirements stated within the plan; and (c) In effect at all times during the carrying out of the activity; and (d) Re-endorsed in writing as being in compliance with the conditions of this environmental authority by an appropriately qualified person at least annually; and (e) Provided to the administering authority upon request in the time requested.
3-G4	All testing and monitoring required by the conditions of Part 3 of this environmental authority: (a) Must be carried out in the manner specified by this environmental authority; and (b) Must be carried out on samples that are representative of the material being tested; and (c) Must be carried out using monitoring devices that are calibrated and maintained according to the manufacturers' specifications; and (d) For testing required by a laboratory, must be carried out by a laboratory that has National Association of Testing Authorities (NATA) accreditation for such analyses; and (e) Must be carried out, interpreted and recorded by an appropriately qualified person; and (f) For finished compost monitoring required by condition 3-W2, must be carried out in accordance with the test methods listed for the relevant parameters in AS 4454:2012 (Composts, soil conditioners and mulches) or more recent version; and (g) For PFAS monitoring, must: i. use analysis techniques that achieve lowest practicable limits of reporting (LOR <0.5 µg/kg solids; LOR <0.001 µg/L for liquids) and maximise extraction of PFAS from samples; and

	ii. comply with recommendations in the PFAS National Environmental Management Plan (NEMP)[1] Version 2.0 or more recent editions adopted by the Queensland Government; and iii. incorporate paired standard and Total Oxidisable Precursor (TOP) Assay analysis to determine PFAS concentrations and must include at least the PFAS types that are limited by this environmental authority (condition 3-W2); and iv. incorporate quality assurance checks for Total Oxidisable Precursor (TOP) Assay[2]; and v. give due regard to any advice from the administering authority concerning improvements in analysis techniques for the feedstocks accepted; and vi. for leachability, be undertaken using the Australian Standard Leaching Procedure (ASLP) with an unbuffered leach solution.
3-G5	A Compost Process Plan must be developed to achieve pasteurisation and minimisation of odour impacts of composting materials, which includes: (a) Composting process parameters for the feedstock and processing techniques being used on site, which includes process parameters for: i. C:N ratio; and ii. Porosity or bulk density; and iii. Moisture content; and iv. pH; and v. Oxygen content; and vi. Temperature range; and (b) Information to support the appropriateness of the composting process parameters with regard to the feedstock and processing techniques being used on site; and (c) Methods and frequencies for monitoring composting material to assess that the composting process parameters are being met; and (d) At a minimum, annual reviews of the effectiveness of the composting process parameters at achieving pasteurisation and minimising odour impacts.
3-G6	Composting material must comply with composting process parameters identified in the Compost Process Plan required by condition 3-G5.
3-G7	The following records must be kept for all monitoring undertaken to assess that the composting process parameters are being met: (a) records of any analysis, measurements or observations of composting material and the name/s of the person/s undertaking the assessment; and (b) records of any samples taken (including sample ID, laboratory holding time, storage method and storage location).

[1] The PFAS NEMP is available online on the Australian Government Department of Agriculture, Water and Environment website at https://www.environment.gov.au/

[2] Refer to recommendations in the Australasian Land & Groundwater Association (ALGA) funded TOP Assay reliability study (Ventia 2019). Ventia (2019) Improving Measurement Reliability of the PFAS TOP Assay. Australasian Land and Groundwater Association Report 20 June 2019, 1-96pp

3-G8	A Feedstock Management Plan must be developed for the activity and implemented, which includes: (a) Methods for characterising all feedstock and determining its odour rating by reference to: i. "Odour Rating" in Schedule 1—Odour: *Table 1 – Odour rating of composting feedstock*; or ii. If the feedstock is not listed in Schedule 1—Odour: *Table 1 – Odour rating of composting feedstock*, refer to the "Organic Feedstock Odour Rating Assessment" available on the department's website. (b) Feedstock storage requirements based on the odour ratings and physical compositions of each type of feedstock; and (c) Feedstock processing requirements based on the odour ratings and physical compositions for each type of feedstock; and (d) Procedures for the sampling and testing the Carbon (C) and Nitrogen (N) of any feedstock accepted on the site to inform the C:N ratio of composting material; and (e) Procedures to assess whether the feedstock received at the site is suitable for the processing techniques being used; and (f) Procedures to assess potential feedstock received at the site to determine whether it is lawfully able to be used as a feedstock, including under the conditions of this environmental authority; and (g) Procedures for rejecting unsuitable and/or unlawful feedstock; and (h) Procedures for reporting unlawful waste delivery to the administering authority.
3-G9	Feedstock must not be used for the activity unless it is assessed in accordance with the Feedstock Management Plan required by condition 3-G8
3-G10	The following records must be kept for all feedstock received and anything which is rejected as feedstock under the Feedstock Management Plan required by condition 3-G8: (a) Generator and/or transporter of the feedstock including their contact details; and (b) Time and date feedstock was received at the site; and (c) Description of feedstock; and (d) Weight or volume of feedstock; and (e) Feedstock odour rating as assessed under the Feedstock Management Plan required by condition 3-G8; and (f) Details of any samples taken (including sample ID, laboratory holding time, storage method and storage location); and (g) Measurements, observations and characterisation results of feedstock; and (h) The name of any person undertaking any measurements, observations or characterisation of feedstock.
Agency interest – Air	
Condition number	**Condition**

3-A1	**Dust and Particulate Emissions for Composting and Soil Conditioner Manufacturing** The person undertaking the activity to which this approval relates must undertake all reasonable and practicable measures to minimise wind-borne dust and particulate matter emissions to the atmosphere from the composting and soil conditioner manufacturing at the place to which this environmental authority relates. Examples of measures include — (a) windrow or biopile forming, turning, mixing, blending, screening, crushing and grinding operations in calm weather conditions, early hours of the morning or when temperature inversion layers are not present; (b) maintenance of any windrows, biopiles, waste and material stockpiles in moist conditions; (c) screening, crushing or grinding only material in a moist state; (d) carrying out screening, crushing or grinding activities using equipment fitted with effective screens which are impervious to the particulate material likely to be generated; and (e) establishing suitable wind breaks.
3-A2	Any feedstock identified under condition 3-G8(a) as having an odour rating of high or very high unloaded at the site for composting must be — (a) mixed or blended and formed into windrows or biopiles as soon as possible, and no later than the same day of receipt at the approved place; or (b) covered with green waste or compost as soon as possible and no later than the same day of receipt at the approved place.
3-A3	Leachate must be collected and stored in: (a) Aerated ponds that maintain aerobic conditions; or (b) An enclosed leachate tank.
Agency interest: Waste	
Condition number	**Condition**
3-W1	**Waste Acceptance for Composting and Soil Conditioner Manufacturing** Only the following feedstock can be used in the composting process: (a) the following feedstocks as defined in *Schedule 1*: *Table – Odour rating of composting feedstock*: (i) animal manure; (ii) abattoir waste; (iii) biosolids; (iv) bark, lawn clippings, leaves, mulch, pruning waste, sawdust, shavings, woodchip and other waste from forest; (v) a substance used for manufacturing fertiliser for agricultural, horticultural or garden use;

	(vi) fish processing waste; (vii) food and food processing waste; (viii) grease trap waste (ix) green waste (x) inorganic additives with beneficial properties (xi) mushroom compost and mushroom growing substrate; (xii) cardboard and paper waste; (xiii) poultry processing waste; (xiv) wood waste from untreated timber (b) a resource approved under an applicable End of Waste (EOW) Code that authorises the use of the resource for composting.
3-W2	All finished compost must be monitored for the quality characteristics and at the frequency listed in *Table – Finished Compost Quality Characteristic Limits*.

Table – Finished Compost Quality Characteristic Limits

Quality Characteristic	Quality Characteristic Limit	Minimum Monitoring Frequency
pH	≥5.0	One composite sample consisting of at least five individual grab samples must be collected before the earlier of the following occurring (measured from when the most recent composite sample was taken): (a) 90 days having passed; or (b) 300 dry solid tonnes (dst) of finished compost being produced
Electrical conductivity	≤10 (dS/m)	
Arsenic	≤20 (mg/kg)	
Cadmium	≤1 (mg/kg)	
Chromium (total)	≤100 (mg/kg)	
Copper	≤150 (mg/kg)	
Lead	≤150 (mg/kg)	
Mercury	≤1 (mg/kg)	
Nickel	≤60 (mg/kg)	
Selenium	≤5 (mg/kg)	
Zinc	≤300 (mg/kg)	
DDT/DDD/DDE	≤0.5 (mg/kg)	
Aldrin	≤0.02 (mg/kg)	
Dieldrin	≤0.02 (mg/kg)	
Chlordane	≤0.02 (mg/kg)	

Heptachlor	≤0.02 (mg/kg)	
HCB	≤0.02 (mg/kg)	
Lindane	≤0.02 (mg/kg)	
BHC	≤0.02 (mg/kg)	
PCBs	Not detected	
E.coli	<100 (MPN/gram)	
Faecal coliforms	<1000 (MPN/gram)	
Salmonella sp.	Not Detected in 50 grams (dry weight equivalent)	
PFOS + PFHxS	≤2 (µg/kg)	
PFOA	≤1 (µg/kg)	
Sum of PFBA, PFPeA, PFHxA, PFHpA, PFNA, PFDA, PFUnDA, PFDoDA, PFTrDA, PFTeDA, 4:2 FTS, 6:2 FTS, 8:2 FTS and 10:2 FTS (above LOR)	≤3 (µg/kg)	
Sum of PFOSA (or FOSA), N-MeFOSA, N-EtFOSA, N-MeFOSE, N-EtFOSE, N-MeFOSAA and N-EtFOSAA (above LOR)	≤1 (µg/kg)	
PFAS leachability	To be kept to minimum practicable (µg/L)	
Glass, metal, rigid plastics	≤0.5 (% dry matter weight/weight)	
Plastics – light, flexible, film	≤0.05 (% dry matter weight/weight)	
Viable plant propagules	Not detected	

3-W3	Finished compost must comply with the quality characteristics limits listed in *Table – Finished Compost Quality Characteristic Limits*.

Agency Interest: Water	
Condition Number	**Condition**

3-WT1	Any stormwater which filters through composting piles, stored feedstock and finished compost must be managed as leachate.
3-WT2	Leachate collection and storage must be designed, installed, operated and maintained by an appropriately qualified person to: (a) Prevent ponding of leachate in any area other than the designated leachate collection and/or storage areas; and (b) Prevent the leachate directly entering a stormwater basin; and (c) Drain leachate away from composting material; and (d) Drain leachate to a collection drain; and (e) Ensure the structural integrity of the impervious barrier is maintained.
Agency Interest: Land	
Condition Number	**Condition**
3-L1	An area that has an impervious barrier to subsoil and groundwater must be used when conducting any of the following: (a) receiving, mixing and storing feedstock; and (b) processing and storing composting material; and (c) collecting and storing leachate or stormwater runoff from disturbed areas.

Part 4: Conditions for ERA 55(1)(c), ERA 55(2)(c), ERA 55(3)(c)

Location: 55 Champions Way WILLOWBANK QLD 4306
Lot 3 on Plan SP167885

The environmentally relevant activity conducted at the location as described above must be conducted in accordance with the following site-specific conditions of approval.

PART 4 – OTHER WASTE REPROCESSING – BIOREMEDIATION, CHEMICAL STABILISATION OR FIXATION AND ACID AND ALKALI NEUTRALISATION

Agency interest: General	
Condition number	**Condition**
4-G1	**Windrow and Biopile Size for Bioremediation** Windrows and biopiles for bioremediation must have a maximum width of twelve (12) metres (m) and a maximum height of one and a half (1.5) metres (m).
4-G2	**Layer Height for Chemical Stabilisation Spread and Apply Method** Waste to be treated by chemical stabilisation or fixation by spreading and applying chemical additive must be a maximum height of four hundred (400) millimetres (mm) before being turned and mixed.
Agency interest: Air	
Condition number	**Condition**
4-A1	**Dust and Particulate Emissions for Bioremediation, Chemical Stabilisation or Fixation and Acid and Alkali Neutralisation** The person undertaking the activity to which this approval relates must undertake all reasonable and practicable measures to minimise wind-borne dust and particulate matter emissions to the atmosphere from bioremediation, chemical stabilisation or fixation and acid or alkali neutralisation at the place to which this approval relates.
4-A2	**Odorous Wastes or Materials for Bioremediation** Any odorous wastes or materials unloaded at the place to which this approval relates for bioremediation must be — (a) mixed or blended and formed into windrows or biopiles on the same day of receipt at the approved place; or (b) covered with green waste, compost, tarpaulins or plastic sheeting on the same day of receipt at the approved place.
4-A3	**Odorous Wastes or Materials for Chemical Stabilisation or Fixation**

	Any odorous wastes or materials unloaded at the place to which this approval relates for chemical stabilisation or fixation must be — (a) mixed or blended and formed into windrows or biopiles on the same day of receipt at the approved place; or (b) covered with overburden, tarpaulins or plastic sheeting on the same day of receipt at the approved place.
Agency interest: Land	
Condition number	**Condition**
4-L1	**Bunding for Acid or Alkali Neutralisation** The area on the chemical fixation and acid and alkali neutralisation waste storage and treatment cell used for acid or alkali neutralisation must have a designated bund to contain at least one hundred per cent (100%) of the largest tank plus ten per cent (10%) of the second largest tank within the bund.
4-L2	**Piping and Equipment for Acid or Alkali Neutralisation** All piping and pumping equipment used for the receipt and transfer of spent liquid acid or alkali solutions must be corrosion resistant.
Agency interest: Waste	
Condition number	**Condition**
4-W1	**Waste Acceptance for Bioremediation** The only wastes to be received and treated by bioremediation at the place to which this approval relates are soil, sediment and sludge contaminated with one or more of the following compounds — (a) butane, toluene, ethylbenzene and xylene (BTEX) compounds; (b) heavy end hydrocarbon fractions; (c) light end hydrocarbon fractions; (d) polycyclic aromatic hydrocarbons; (e) organophosphorus pesticides; or (f) phenoxyacetic acid herbicides (including 2,4-Dichlorophenoxyacetic acid (2,4-D) and esters, 2-Methyl-4-chlorophenoxyacetic acid (MCPA), Triclopyr and 2,4,5-Trichlorophenoxyacetic acid (2,4,5-T)).

4-W2	The only materials to be added to wastes for light hydrocarbon bioremediation treatment at the place to which this approval relates are materials that are one or more of the following — (a) green waste; (b) contained treatment pad runoff water; (c) nutrients; (d) biosolids; or (e) low organic soils.
4-W3	The only materials to be added to wastes for heavy hydrocarbon bioremediation treatment at the place to which this approval relates are materials that are one or more of the following — (a) compost; (b) engineered bacteria; (c) biosolids; (d) nutrients; (e) surfactants; or (f) contained treatment runoff pad water.
4-W4	The only materials to be added to wastes for herbicide and pesticide bioremediation treatment at the place to which this approval relates are materials that are one or more of the following — (a) engineered bacteria; (b) green waste; or (c) contained treatment pad runoff water.
4-W5	Wastes, and materials added to wastes, must be homogeneously mixed prior to formation of stockpiles for curing.
4-W6	**Temperature Monitoring for Bioremediation** The temperature of any windrow or biopile must not exceed 67°C.
4-W7	Temperature profile monitoring of windrows and biopiles must be conducted throughout each windrow or biopile once in each period of seventy two (72) hours
4-W8	Records of temperature monitoring required by condition 4-W7 must be kept on site and be available for inspection by the administering authority.
4-W9	**Bioremediation Operations** Heavy hydrocarbon bioremediation windrows or biopiles must be covered with three hundred (300) micrometres (µm) of silage plastic sheeting.
4-W10	**Validation Sampling of Treated Material from Bioremediation** Validation sampling of treated waste from the bioremediation treatment process must be undertaken as specified in *Table – Validation Sampling Following Treatment by*

	Bioremediation to determine compliance with criteria for disposal to a facility that can lawfully accept such waste.

Table – Validation Sampling Following Treatment by Bioremediation

Volume of contaminated soil treated by bioremediation at the approved place	Type of Sample
< 100 m^3	Ten (10) representative samples of 0.5 kilogram (kg) to be collected and mixed so that one (1) composite sample weighing 1.0 kilogram (kg) is obtained for analysis.
> 100 m^3	Ten (10) representative samples of 0.5 kilogram (kg) to be collected and mixed so that one (1) composite sample weighing 1.0 kilogram (kg) per twenty per cent (20%) of the volume of soil treated by bioremediation at the approved place is obtained for analysis. *For example, if 1000 m^3 of contaminated soil was received at the approved place for treatment, then one (1) one kilogram (1kg) composite sample per 200 m^3 would be created and a total of five (5) composite samples would be obtained.*

4-W11

Waste Acceptance for Chemical Stabilisation

The only wastes to be received and treated by chemical stabilisation are wastes that are one or more of the following —

(a) acids in solid form;
(b) alkalis in solid form;
(c) animal by-products from poultry processing;
(d) ash, flour, leather dust and sludges from tannery processes;
(e) biosolid sludges contaminated with heavy metals from Council wastewater treatment;
(f) corrosive sludges;
(g) cyanide wastes from heat treatment and tempering operations;
(h) filter cake;
(i) fire debris and washwaters;
(j) foundry sands;
(k) heavy metal contaminated soils;
(l) heavy metal sludges;
(m) heavy metal solid waste;
(n) herbicide sludges;
(o) hydrocarbon sludges;
(p) hydrocarbon contaminated soils that cannot be bioremediated;
(q) metal finishing sludges;
(r) polycyclic aromatic hydrocarbon contaminated soils; or

	(s) phenolic sludges.
4-W12	The only materials to be added to wastes at the place to which this approval relates for chemical stabilisation are materials that are one or more of the following — (a) cement powder; (b) superphosphate; (c) ferric chloride; (d) ferric sulphate; (e) polysulphides; (f) polysulphates; (g) activated carbon; (h) aluminium hydroxide; (i) amorphous aluminium hydroxide; (j) reactive clays; (k) lime; (l) quick lime; (m) hydrated lime; (n) magnesium oxide; (o) magnesium hydroxide; or (p) contained treatment pad runoff water.
4-W13	Wastes, and materials added to wastes, must be homogeneously mixed prior to formation of stockpiles for curing.
4-W14	**Validation Sampling of Treated Material from Chemical Stabilisation** Validation sampling of treated waste from the chemical stabilisation treatment process must be undertaken as specified in *Table – Validation Sampling Following Treatment by Chemical Stabilisation* to determine compliance with criteria for disposal to a facility that can lawfully accept such waste.

Table – Validation Sampling Following Treatment by Chemical Stabilisation

Volume of contaminated soil treated by chemical stabilisation at the approved place	Type of Sample
< 100 m^3	Ten (10) representative samples of 0.5 kilogram (kg) to be collected and mixed so that one (1) composite sample weighing 1.0 kilogram (kg) is obtained for analysis.
> 100 m^3	Ten (10) representative samples of 0.5 kilogram (kg) to be collected and mixed so that one (1) composite sample weighing 1.0 kilogram (kg) per twenty per cent (20%) of the volume of soil treated by chemical stabilisation at the approved place is obtained for analysis. *For example, if 1000 m^3 of contaminated soil was received at the approved place for treatment, then one (1) one kilogram (1kg) composite sample per 200 m^3 would be created and a total of five (5) composite samples would be obtained.*

4-W15	**Waste Acceptance for Acid or Alkali Neutralisation, Pre-treatment and Precipitation** The only wastes to be received and treated by acid or alkali neutralisation are — (a) spent liquid acid solutions with a free acidity of less than or equal to () 0.25%; and (b) spent liquid alkali solutions.
4-W16	Waste acid or alkali solutions received at the facility must only be stored in containers or tanks constructed of material suitable to contain the waste.
4-W17	For each consignment of waste that undergoes or is used in the neutralisation or metal precipitation process at the site a record must be kept at the site of the — (a) free acid or alkalinity analysis; and (b) results of the bench test analysis and observations undertaken in accordance with the procedures described in Operational Procedure for Acid/Alkali Neutralisation contained in the document titled TiTree Bioenergy: QLD - Operational Procedures for Chemical Stabilisation dated 28/03/2011.
4-W18	**Acid or Alkali Neutralisation, Pre-treatment and Precipitation Tanks** Acid or alkali neutralisation must only be carried out in tanks that meet all of the following requirements— (a) less than or equal to twenty thousand (20,000) litres storage capacity; (b) constructed of material suitable to contain the waste and any material inputs; (c) fitted with agitation equipment that is operational at the time of treatment and that ensures homogeneous mixing; (d) fitted with pipe and pumps suitable to contain the waste and material used in the treatment process; and (e) fitted with a suitable tank fill level indicator and operational alarm system.

4-W19	Waste pre-treatment and precipitation reactions must only be carried out in a tank that complies with all of the following requirements — (a) less than or equal to five thousand (5,000) litres storage capacity; (b) constructed of material suitable to contain the waste and any material inputs; (c) fitted with agitation equipment that is operational at the time of treatment and ensures homogeneous mixing; (d) fitted with pipe and pumps suitable to contain the waste and material used in the treatment process; and (e) fitted with a suitable tank fill level indicator and operational alarm system.
4-W20	**Acid or Alkali Neutralisation, Pre-treatment and Precipitation Waste** Waste from the pre-treatment and precipitation process must be — (a) removed from the reaction tank and taken to a fixation bay within the chemical fixation and acid and alkali neutralisation waste storage and treatment cell; and then (b) homogeneously mixed with the fixative reagent; and (c) allowed to cure for a minimum of five (5) days.
4-W21	**Sampling of Neutralised Liquid from Acid or Alkali Neutralisation** A representative sample of neutralised solution from each neutralisation treatment process must be — (a) tested in situ to determine neutralisation has been achieved and a record kept of the test result; and (b) kept at the site for thirty (30) days; and (c) be available for examination by an authorised person.
4-W22	**Validation Sampling of Fixated Waste from Acid or Alkali Neutralisation** A representative sample of fixated waste must be obtained from each batch of treated and fixated waste by collecting and mixing ten (10) representative samples of 0.5 kilogram (kg) of the fixated waste to produce a 1.0 kilogram (kg) composite sample for analysis.
4-W23	The 1.0 kilogram (kg) composite and representative sample of fixated waste obtained in accordance with condition 4-W22 must be tested in accordance with the Toxicity Characteristic Leaching Procedure (TCLP).
4-W24	**Disposal and Use of Neutralised Liquids from Acid or Alkali Neutralisation** Neutralised liquids from the acid or alkali neutralisation process must be — (a) disposed of at a facility that can lawfully accept such waste; or (b) used in the pre-treatment and fixation process.
4-W25	**Receival of Wastes for Bioremediation, Chemical Stabilisation and Acid or Alkali Neutralisation** The person undertaking the activity to which this approval relates must —

	(a) take a representative sample from every delivery of waste accepted at the approved place for bioremediation, chemical stabilisation and acid or alkali neutralisation; (b) clearly label the sample taken with the date and an identification number that is cross referenced with the relevant waste transport documentation; (c) retain samples for at least three (3) months from the date of acceptance of the waste; and (d) ensure samples are available for examination by an authorised person.

Part 5: Conditions for ERA 61(3)(c) - Thermal waste reprocessing and treatment

Location: 55 Champions Way WILLOWBANK QLD 4306

Lot 3 on Plan SP167885

The environmentally relevant activity conducted at the location as described above must be conducted in accordance with the following site-specific conditions of approval.

PART 5 – THERMAL WASTE REPROCESSING AND TREATMENT

Agency interest: General	
Condition number	**Condition**
5-G1	**Maximum Waste Feed Size** Waste treated by indirect thermal desorption must be a maximum feed size of thirty (30) millimetres (mm).
Agency interest: Air	
Condition number	**Condition**
5-A1	**Dust and Particulate Emissions for Indirect Thermal Desorption** The person undertaking the activity to which this approval relates must undertake all reasonable and practicable measures to minimise wind-borne dust and particulate matter emissions to the atmosphere from indirect thermal desorption at the place to which this environmental authority relates. Examples of measures include — (a) screening, crushing or grinding operations in calm weather conditions, early hours of the morning or when temperature inversion layers are present; (a) maintenance of any waste or material stockpiles in moist conditions; (b) screening, crushing or grinding material in a moist state; (c) carrying out screening and crushing activities using equipment fitted with effective screens which are impervious to the particulate material likely to be generated by the screening and crushing activities; and (d) establishing suitable wind breaks.
5-A2	**Fuel for Indirect Thermal Desorption** The only fuels to be used in the indirect thermal desorption unit are — (a) natural gas; and (b) fuel oil.
5-A3	**Maintaining Vacuum for Indirect Thermal Desorption**

	The rotary drying unit used for indirect thermal desorption must be maintained under vacuum in an inert (less than five per cent (5%) oxygen) atmosphere. ***Note:*** In the event that the vacuum in the rotary drying unit is interrupted, then treatment must cease until the problem is rectified.
5-A4	**Vapours from Dryers for Indirect Thermal Desorption** All vapour leaving the rotary drying unit must pass through and be treated by — (a) a direct condenser system consisting of a condensing scrubber, droplet catcher, vacuum pump, chiller and a droplet catcher containing crushed glass in series; and (b) an activated carbon filter.
5-A5	**Release to Atmosphere from Indirect Thermal Desorption** Flue gas from the heating flame must only be released to the atmosphere at release point A1, as specified in *Table – Air Quality Release Points for Indirect Thermal Desorption*.
5-A6	The release of contaminants to the atmosphere from indirect thermal desorption unit must only occur from the release points and release heights specified in *Table – Air Quality Release Points for Indirect Thermal Desorption*.

Table – Air Quality Release Points for Indirect Thermal Desorption

Release Point Number	Release Point Description	Minimum Release Height (metres)
A1	Final release point to the atmosphere from the thermal heating unit	4m above the highest point of the indirect thermal desorption plant roofline
A2	Final release point to atmosphere from the activated carbon filter servicing the indirect thermal desorption unit	4m above the highest point of the indirect thermal desorption plant roofline
A3	Final release point to atmosphere from the activated carbon filter servicing the indirect thermal desorption unit	4m above the highest point of the indirect thermal desorption plant roofline

5-A7	Emissions from the indirect thermal desorption unit must not be released concurrently from release points A2 and A3.
5-A8	All emissions released at release point A2 and A3 must have passed through a minimum of one (1) 10m^3 activated carbon filter.
5-9	The concentration of total volatile organic compounds emitted at release point A2 or A3 must not exceed 1mg/Nm^3.
5-A10	All release points identified in *Table – Air Quality Release Points for Indirect Thermal Desorption* must be clearly marked with the corresponding Release Point Number**.**

5-A11	**Carbon Filter/s** The person undertaking the activity to which this approval relates must ensure that replacement activated carbon filter/s are available at the approved place at all times.
5-A12	**Volatile Organic Compounds Monitoring** The person undertaking the activity to which this approval relates must, prior to use of the indirect thermal desorption unit, install a permanent Flame Ionisation Detector at each of the following locations — (a) halfway point in the activated carbon filter servicing release point A2; (b) halfway point in the activated carbon filter servicing release point A3; (c) at a point that is representative of emissions from the indirect thermal desorption unit at release point A2**;** and (d) at a point that is representative of emissions from the indirect thermal desorption unit at release point A3.
5-A13	When the indirect thermal desorption unit is in use the person undertaking the activity to which this approval relates must continuously monitor and keep a record of the concentration of volatile organic compounds detected by the Flame Ionisation Detectors specified in condition 5-A12.
5-A14	**Environmental Impact Air Monitoring** The person undertaking the activity to which this approval relates must engage an independent, suitably qualified and experienced person to conduct Environmental Impact Air Monitoring to characterise and assess the impact of emissions on the surrounding environment from the release points specified in *Table – Air Quality Release Points for Indirect Thermal Desorption* at the following frequency — (a) within three (3) months of completion of the commissioning period for the indirect thermal desorption unit; and (b) annually from the anniversary date of completion of the commissioning period for the indirect thermal desorption unit.
5-A15	Environmental Impact Air Monitoring undertaken at the approved place as specified in condition 5-A14 (a) must include quantitative monitoring for all contaminants specified in *Table– Waste Acceptance Criteria and Maximum Concentration Limits* in the emissions released at release points A2 and A3 during treatment of a minimum of three separate consignments of waste.
5-A16	Environmental Impact Air Monitoring undertaken at the approved place as specified in condition 5-A14(b) must include quantitative monitoring for all contaminants specified in *Table – Waste Acceptance Criteria and Maximum Concentration Limits* in the emissions released at release point A2 and A3 during treatment of the first batch of waste in each annual period containing greater than 50 per cent (50%) of the maximum permitted concentration specified in *Table – Waste Acceptance Criteria and Maximum Concentration Limits* of one or more of the following contaminants — (a) polycyclic aromatic hydrocarbons; (b) organochloride pesticides; (c) organophosphorus pesticides; or

	(d) chlorinated solvents.
5-A17	Within one (1) month of undertaking any air monitoring specified in condition **5**-A14 the person undertaking the activity to which this approval relates must submit to the administering authority a report on the Environmental Impact Air Monitoring, which must include the following — (a) a record of the results, modelling and assessment of the monitoring conducted at the approved place; and (b) an interpretation and conclusion by a suitably qualified person in the field of air monitoring and pollution of the environmental impact of the releases at the approved place.
5-A18	The total financial cost of the Environmental Impact Air Monitoring and preparation and lodgement of the report, will be the responsibility of the person undertaking the activity to which this approval relates.

Agency interest: Waste

Condition number	**Condition**
5-W1	**Waste Acceptance** The only wastes to be accepted and treated by indirect thermal desorption are soil, sediment or sludge with contaminants that do not exceed the maximum concentrations specified in *Table – Waste Acceptance Criteria and Maximum Concentration Limits*.

Table – Waste Acceptance Criteria and Maximum Concentration Limits

Contaminant	**Maximum Concentration**
Total BTEX (butane, toluene, ethylbenzene and xylene)	50,000 ppm
Aliphatic hydrocarbons	160,000 ppm
Polycyclic aromatic hydrocarbons	50,000 ppm
Organochloride Pesticides	10,000 ppm
Organophosphorus Pesticides	10,000 ppm
Chlorinated Solvents	20,000 ppm
Non-Chlorinated Solvents	10,000 ppm

5-W2	The only materials to be added to wastes at the place to which this approval relates for indirect thermal desorption are materials that are one or more of the following — (a) cement kiln dust; (b) cement powder;

	(c) lime; (d) magnesium hydroxide; (e) sand; or (f) polyphosphates.
5-W3	**Receival of Wastes for Indirect Thermal Desorption** The person undertaking the activity to which this approval relates must do all of the following— (a) take a sample from every delivery of waste accepted at the approved place for indirect thermal desorption; (b) clearly label the sample taken with the date and an identification number that is cross referenced with the relevant waste transport documentation; (c) retain samples for at least three (3) months from the date of acceptance of the waste; and (d) ensure samples are available for examination by an authorised person.
5-W4	Wastes, and materials added to wastes, must be homogeneously mixed prior to treatment.
5-W5	**Waste Conformity Sampling** The person undertaking the activity to which this approval relates must ensure that validation sampling is undertaken on — (a) each load of waste accepted at the approved place for indirect thermal desorption as specified in *Table – Validation Sampling Prior to Treatment by Indirect Thermal Desorption*; and (b) all batches of treated waste arising from the indirect thermal desorption process as specified in *Table – Validation Sampling Following Treatment by Indirect Thermal Desorption*.

Table – Validation Sampling Prior to Treatment by Indirect Thermal Desorption

Volume of contaminated soil received at the approved place for treatment	**Type of Sample**
< 100 m^3	Ten (10) representative samples of 0.5 kilogram (kg) to be collected and mixed so that one (1) composite sample weighing 1.0 kilogram (kg) is obtained for analysis.
> 100 m^3	Ten (10) representative samples of 0.5 kilogram (kg) to be collected and mixed so that one (1) composite sample weighing 1.0 kilogram (kg) per twenty per cent (20%) of the volume of soil received at the approved place is obtained for analysis. *For example, if 1000 m^3 of contaminated soil was received at the approved place for treatment, then one (1) composite sample per 200 m^3 would* 1.0 kilogram (kg) *be created and a total of five (5) composite samples would be obtained.*

Table – Validation Sampling Following Treatment by Indirect Thermal Desorption

Volume of contaminated soil treated by indirect thermal desorption at the approved place	Type of Sample
< 100 m^3	Ten (10) representative samples of 0.5 kilogram (kg) to be collected and mixed so that one (1) composite sample weighing 1.0 kilogram (kg) is obtained for analysis.
> 100 m^3	Ten (10) representative samples of 0.5 kilogram (kg) to be collected and mixed so that one (1) composite sample weighing 1.0 kilogram (kg) per twenty per cent (20%) of the volume of soil treated at the approved place is obtained for analysis. *For example, if 1000 m^3 of contaminated soil was treated at the approved place for treatment, then one (1) composite sample per 200 m^3 would* 1.0 kilogram (kg) *be created and a total of five (5) composite samples would be obtained.*

5-W6	**Disposal of Condensate and Spent Carbon Filters from Indirect Thermal Desorption** Condensate and spent carbon filters produced from indirect thermal desorption must be collected and stored in sealed drums or intermediate bulk containers.
5-W7	Drums and intermediate bulk containers used to store condensate and spent carbon filters from indirect thermal desorption must be stored in a bunded area.
5-W8	Total storage at any point in time at the approved place of condensate and spent carbon filters from indirect thermal desorption must not exceed the following — (a) 1m^3 of condensate; or (b) 30m^3 of spent activate carbon filters.
5-W9	Condensate and spent carbon filters from indirect thermal desorption must only be sent to a treatment recovery or disposal facility that can lawfully receive the waste.

PART 6: ERA 60 (1)(d) – Waste disposal

Location: 55 Champions Way WILLOWBANK QLD 4306

Lot 3 on Plan SP167885

Relevant activities:

60-(1)(d) Waste disposal >200000t yr (1)(a)

Previous Permit: SR1483

IPCE00616407/SR0063DA – Concurrence Agency Reponse

The environmentally relevant activity conducted at the location as described above must be conducted in accordance with the following site specific conditions of approval.

Agency Interest: General	
Condition number	**Condition:**
6-G1	All reasonable and practicable measures must be taken to minimise the likelihood of environmental harm being caused.
6-G2	The activity must be undertaken in accordance with written procedures that: 1. identify potential risks to the environment from the activity during routine operations, closure and an emergency 2. establish and maintain control measures that minimise the potential for environmental harm 3. ensure plant, equipment and measures are maintained in a proper and effective condition 4. ensure plant, equipment and measures are operated in a proper and effective manner ensure that staff are trained and aware of their obligations under the *Environmental Protection Act 1994* 5. ensure that reviews of environmental performance are undertaken at least annually.
6-G3	Other than as permitted by this environmental authority, the release of a contaminant into the environment must not occur.
6-G4	Any breach of a condition of this environmental authority must be reported to the administering authority as soon as practicable, or at most, within 24 hours of you becoming aware of the breach. Records must be kept including full details of the breach and any subsequent actions undertaken.
6-G5	All information and records that are required by the conditions of this environmental authority must be kept for a minimum of five (5) years. Environmental monitoring results must be kept until surrender of this environmental authority. All information and records required by the conditions of this environmental authority must be provided to the administering authority upon request.
6-G6	An appropriately qualified person(s) must monitor, record and interpret all parameters that are required to be monitored by this environmental authority and in the manner specified by this environmental authority.

6-G7	All analyses required under this environmental authority must be carried out by a laboratory that has NATA certification, or an equivalent certification, for such analyses. The only exception to this condition is for *in situ* monitoring of Electrical Conductivity (EC), Dissolved Oxygen (DO), turbidity and pH.
6-G8	When required by the administering authority, monitoring must be undertaken in the manner prescribed by the administering authority, to investigate a complaint that is not considered by the administering authority to be frivolous or vexatious, of environmental nuisance arising from the activity. The monitoring results must be provided to the administering authority upon request.
6-G9	All batteries, liquid chemicals, fuels, and other liquid substances with potential to cause environmental harm must be stored within a secondary containment system that is impervious to the materials stored within it, and must be managed to prevent the release of contaminants to waters or land.
6-G10	All reasonable and practicable measures must be taken to contain litter within the waste operations area, and retrieve litter released.
6-G11	All reasonable and practicable measures must be taken to exclude vectors and pest species to the extent necessary to prevent: 1. nuisance to occupiers of neighbouring premises 2. any danger or risk to the health of any persons.
6-G12	**Financial Assurance** A financial assurance must be provided to the administering authority in compliance with the following requirements: (i) The holder of this environmental authority must provide and maintain a financial assurance security in the form of an irrevocable, unconditional and on demand bank guarantee in favour of the administering authority in the amount of $1.5 million before the initial acceptance of waste; and (ii) The holder of this environmental authority must increment the initial financial assurance security of $1.5 million with the amount of $1 million according to *Table – Financial Assurance*; and (iii) The financial assurance security must be incremented until the total is $8.5 million and that financial assurance security must be maintained until the administering authority is satisfied that no claim is likely to be made on the assurance and in excess of any claims made in respect of such financial assurance under the provisions of Subdivision 3 Division 2 Part 12 Chapter 5 of the *Environmental Protection Act 1994*; and (iv) A certificate or certificates of insurance covering third party liability and for sudden and accidental events that result in environmental harm or nuisance must be maintained and provided to the administering authority. The sum or sums so insured must equal or exceed $5,000,000 for public liability and $40,000,000 for contracts and defects liability. Proof of any payments towards the maintenance of the financial assurance security(s) and the relevant financial assurance certificates must be submitted with each subsequent Annual Return.

TABLE – Financial Assurance

When	Value of Bank Guarantee

At time of initial acceptance of waste	$1,500,000
After acceptance of 400,000 tonnes of waste	$2,500,000
After acceptance of 800,000 tonnes of waste	$3,500,000
After acceptance of 1,200,000 tonnes of waste	$4,500,000
After acceptance of 1,600,000 tonnes of waste	$5,500,000
After acceptance of 2,000,000 tonnes of waste	$6,500,000
After acceptance of 2,400,000 tonnes of waste	$7,500,000
After acceptance of 2,800,000 tonnes of waste or more	$8,500,000

6-G13	**Environmental Monitoring** The holder of this environmental authority must implement and maintain an effective environmental monitoring program to describe the impacts of the activity on air quality (for ambient air particulate matter and landfill gas), groundwater quality (including landfill leachate), and surface waters (stormwater and landfill leachate).
6-G14	The environmental monitoring program required by condition 6-G12 must address at least: (i) the type and location of all environmental monitoring facilities; (ii) adopted point(s) of testing; (iii) methodology to be used in the assessment of the monitoring results (including statistical tests to be used in the interpretation of the collected data); and (iv) the proposed management response (Investigation Monitoring Program) in the event release of contaminants was not in accordance with the conditions of this environmental authority.
6-G15	The holder of the environmental authority must, with regard to the environmental monitoring program: (i) record all analyses, measurements and observations in writing; (ii) record the date and time of sampling; (iii) cause the laboratory Certificate of Analysis for monitoring results to bear a National Association of Testing Authorities stamp of endorsement (where relevant); (iv) sign the record of all analyses, measurements and observations or arrange for the said record to be signed by a responsible officer; and (v) summarise the recordings of all observations, measurements and analyses of the environmental monitoring program.
6-G16	**Annual Monitoring Report** Any monitoring data compiled, collected or recorded as required by conditions of this environmental authority for: - ambient air monitoring; - surface water monitoring and the water quality releases to surface water; - groundwater monitoring program;

	- leachate and leachate treatment plant monitoring; and - landfill gas monitoring must be evaluated, summarised and compiled into a report on an annual basis (the Annual Monitoring Report).
6-G17	An Annual Monitoring Report must be made available to the administering authority on request and must present clear summaries of the various aspects of monitoring program in dedicated subsections: • groundwater quality, • surface water quality, • leachate and leachate treatment plant quality, and • air quality. The data summaries from each monitoring program must include results presented: i. in a tabular format, showing: a. date and time sampled; b. any statistical differences observed compared to baseline data; c. any non-compliances; and ii. graphically, showing data referred to in part (i)(b) of this condition versus time.
6-G18	**Complaint Recording** All complaints received by the holder of this environmental authority relating to operations at the place to which this environmental authority relates must be recorded in a log book with the following details: (i) time, date and nature of complaint; (ii) type of communication (telephone, letter, personal etc.); (iii) name, contact address and contact telephone number of complainant (Note: if the complainant does not wish to be identified then "Not identified" is to be recorded); (iv) response and investigation undertaken as a result of the complaint; (v) name of person responsible for investigating complaint; and (vi) action taken as a result of the complaint investigation and signature of responsible person.
Agency Interest: Air	
Condition number	**Condition:**
6-A1	Odours or airborne contaminants which are noxious or offensive must not cause nuisance to any sensitive place or commercial place.
6-A2	Dust and particulate matter emissions must not exceed the following concentrations at any sensitive place or commercial place: (a) dust deposition of 120 milligrams per square metre per day, when monitored in accordance with Australian Standard AS 3580.10.1 (or more recent editions), or

	(b) a concentration of particulate matter with an aerodynamic diameter of less than 10 micrometre (µm) (PM_{10}) suspended in the atmosphere of 50 micrograms per cubic metre over a 24 hour averaging time, when monitored in accordance with Australian Standard AS 3580.9.3 (or more recent editions) or any other method approved by the administering authority.
6-A3	Monitoring and recording of the dust fallout levels must be undertaken at four (4) locations equally spread around the perimeter of the site where the environmentally relevant activity is carried out.
6-A4	The holder of this environmental authority must monitor and record dust fallout at the landfill facility as often as is necessary but not less frequently than 6 monthly.
6-A5	The following materials must not be used for dust suppression purposes: 1. leachate or landfill gas condensate 2. waste oil or other hydrocarbons.
6-A6	**Management of Landfill Gas** A collection system for landfill gas must be installed and maintained to effectively: (i) minimise likelihood of any subsurface migration of landfill gas from the landfill cell; and (ii) prevent any uncontrolled emission of landfill gas. The collection system for landfill gas for a cell must be installed not later than prior to closure of any landfill cell. The landfill gas collection system must consist of gas monitoring devices, such as monitoring bores and be developed by an appropriately qualified person in the field of landfill gas monitoring program design to be able to competently make recommendations about these matters.
6-A7	**Landfill Gas Monitoring** Landfill gas must not exceed the following limits: 1. 500 parts per million at a height of 50mm above the final and intermediate cover surface including the batter slopes of the landfill unit 2. 25% of the lower explosive limit of the landfill site boundary when measured in facility structures (but excluding facility structures used for landfill gas control and recovery, and leachate collection system components) 3. the lower explosive limit in subsurface geology at or beyond the landfill site boundary 4. landfill gas collected is reused or efficiently flared in a manner that avoids environmental harm 5. 25% of the lower explosive limit within service pits, service trenches, stormwater drains or other structures beyond the landfill site boundary. ***Note:*** *It is not taken to be an exceedance of the limits stated above if, when the results of a monitoring event are higher than the limits stated, necessary repairs are undertaken on relevant infrastructure within 24 hours of the monitoring event and the results of a second monitoring event immediately following these repairs does not exceed the limits stated.*
6-A8	Determination of all the methane gas levels must be performed as often as necessary to ensure protection of human health, having regard to: (i) the likely landfill gas generation rate; (ii) any previous levels of methane gas detected by the monitoring program;

<table>
<tr><td></td><td>(iii) proximity of the landfill facility to any place or persons likely to be adversely affected by landfill gas; and
(iv) the effectiveness of measures implemented to minimise any lateral migration of landfill gas.</td></tr>
<tr><td>6-A9</td><td>Release of Contaminants to the Atmosphere
Contaminants can only be released to air from the following point source:
- leachate treatment plant cooling tower.</td></tr>
<tr><td>6-A10</td><td>Prior to release contaminants must pass through a granular activated carbon filter (GAC).</td></tr>
<tr><td>6-A11</td><td>Performance of the GAC must be monitored in accordance with Table - GAC Performance Monitoring.
Table - GAC Performance Monitoring
<table>
<tr><th>Monitoring Points</th><th>Contaminants</th><th>Monitoring Frequency</th></tr>
<tr><td>GAC inlet (S1)
GAC outlet (S2)</td><td>Monocyclic Aromatic Hydrocarbons
Benzene
Toluene
Ethylbenzene
meta- & para-Xylene
Styrene
ortho-Xylene
Isopropylbenzene
n-Propylbenzene
1.3.5-Trimethylbenzene
sec-Butylbenzene
1.2.4-Trimethylbenzene
tert-Butylbenzene
p-Isopropyltoluene
n-Butylbenzene
Oxygenated Compounds
Vinyl Acetate
2-Hexanone (MBK)
Sulfonated Compounds
Carbon disulfide
Fumigants
2.2-Dichloropropane
1.2-Dichloropropane
cis-1.3-Dichloropropylene
trans-1.3-Dichloropropylene
1.2-Dibromoethane (EDB)</td><td>monthly</td></tr>
</table></td></tr>
</table>

		Halogenated Aliphatic Compounds	
		Dichlorodifluoromethane	
		Chloromethane	
		Vinyl chloride	
		Bromomethane	
		Chloroethane	
		Trichlorofluoromethane	
		1.1-Dichloroethene	
		Iodomethane	
		trans-1.2-Dichloroethene	
		1.1-Dichloroethane	
		cis-1.2-Dichloroethene	
		1.1.1-Trichloroethane	
		1.1-Dichloropropylene	
		Carbon Tetrachloride	
		1.2-Dichloroethane	
		Trichloroethene	
		Dibromomethane	
		1.1.2-Trichloroethane	
		1.3-Dichloropropane	
		Tetrachloroethene	
		1.1.1.2-Tetrachloroethane	
		trans-1.4-Dichloro-2-butene	
		cis-1.4-Dichloro-2-butene	
		1.1.2.2-Tetrachloroethane	
		1.2.3-Trichloropropane	
		Pentachloroethane	
		1.2-Dibromo-3-chloropropane	
		Hexachlorobutadiene	
		Halogenated Aromatic Compounds	
		Chlorobenzene	
		Bromobenzene	
		2-Chlorotoluene	
		4-Chlorotoluene	
		1.3-Dichlorobenzene	
		1.4-Dichlorobenzene	
		1.2-Dichlorobenzene	
		1.2.4-Trichlorobenzene	
		1.2.3-Trichlorobenzene	
		Trihalomethanes	

	Chloroform		
	Bromodichloromethane		
	Dibromochloromethane		
	Bromoform		
	Naphthalene		
	Naphthalene		

6-A12

Ambient Monitoring program

A continuous ambient monitoring program of hydrogen sulphide (H_2S) must be performed for the following period:

- during commissioning period of the leachate treatment plant;
- for the first three months of the operation of the leachate treatment plant; and
- in the event of an odour complaint thereafter.

Agency Interest: Water

Condition number	**Condition:**

6-WT1

The only contaminants to be released to surface waters are treated stormwater collected from areas of the site not contaminated with waste materials. Release of stormwaters into Ebenezer Creek must be conducted at release point W and W2 in accordance with *Table —Surface water release limits, receiving environment monitoring* and the associated monitoring requirements. A maximum release rate of 8ML/day applies. Releases are authorised to maintain a water level within the sedimentation pond at Reference Level (RL) of 1974 m.

Table —Surface water release limits, receiving environment monitoring

Release and Monitoring Points Description		**Quality characteristic (units)**	**Limit**	**Limit Type**	**Minimum Monitoring Frequency**
Easting	**Northing**				
Release Point W (site 2)		pH (pH units)	6.5-9.0	range	Continuous when releasing
465922	6937982				
Release Point W2 (site 8)		Specific conductance (µS/cm)	6000	maximum	Continuous when releasing
467102	6938221	Dissolved Oxygen (mg/L)	4.0	minimum	Continuous when releasing
		Total Organic Carbon (mg/L)	20	maximum	Monthly when releasing
		Suspended Solids (mg/L)	50*	maximum	Monthly when releasing
		Ammonia (as N) (mg/L)	#	#	Monthly when releasing

			Nitrate (as N) (mg/L) Bicarbonate(HCO3) (mg/L) Calcium (mg/L) Chloride (mg/L) Iron (total) (mg/L) Lead (mg/L) Manganese (dissolved) (mg/L) Potassium (mg/L) Sodium (mg/L) Sulphate (mg/L) Zinc (mg/L) Chemical Oxygen Demand (mg/L) Biological Oxygen Demand (mg/L) Redox potential (mg/L) Temperature (mg/L) Total Dissolved Solids (mg/L) Total Organic Halogen (mg/L)			
Receiving environment monitoring reference points						
Site 1 465824	6937827	pH (pH units) Specific conductance (µS/cm) Dissolved Oxygen (mg/L) Turbidity Total Organic Carbon (mg/L) Suspended Solids (mg/L) Ammonia (as N) (mg/L) Nitrate (as N) (mg/L) Bicarbonate(HCO3) (mg/L) Calcium (mg/L) Chloride (mg/L) Iron (total) (mg/L) Lead (mg/L) Manganese (dissolved) (mg/L) Potassium (mg/L)	#	#	Monthly when releasing
Site 3 465995	6938346				
Site 4 466575	6938661				
Site5 469211	6938411				
Site6 470237	6940665				
Site7 469154	6936503				

		Sodium (mg/L) Sulphate (mg/L) Zinc (mg/L) Chemical Oxygen Demand (mg/L) Biological Oxygen Demand (mg/L) Redox potential (mg/L) Temperature (mg/L) Total Dissolved Solids (mg/L) Total Organic Halogen (mg/L)			

*The concentration of suspended solids of contaminants released from release point W and W2 when measured at sampling and in situ monitoring point must not exceed:

(i) 50 mg/L; or

(ii) by more than 10%, the concentration of suspended solids in the receiving waters at an up-current point, whichever is the greater (An up-current point is any sampling point in the receiving waters situated between 20 and 40 metres distant from the confluence of the discharge drainage channel serving release point W and W2 and Ebenezer Creek in the upstream direction; samples taken at the up-current point and from the discharge point must be made within one hour of one another).

#Monitoring only, no limits prescribed.

Associated monitoring requirements:

1. Monitoring location being the release point W and W2, described as an overflow pipe from the final sedimentation pond, must be in accordance with a plan depicted in the Appendix 1 Figure 2 "Proposed Receiving Water Monitoring Locations dated 24/09/2015".
2. Monitoring must be in accordance with the methods prescribed in the current edition of the Department of Environment and Heritage Protection Water Quality Sampling Manual.
3. Samples must be taken using representative samples.
4. Baseline water flow before the release must be recorded at each sampling point in the Ebenezer Creek.
5. Water flow in the Ebenezer Creek during the discharge must be recorded.
6. Percentage of the release flow in the total flow in the Ebenezer Creek must be recorded at each point.
7. Water flow in the Ebenezer Creek after the discharge stops must be recorded.
8. All determinations must employ analytical practical quantification limits sufficiently low enough to enable comparisons to be made against water quality objectives/limits relevant to the particular water quality characteristic.
9. Monitoring must be undertaken during a release as per the frequency stated.
10. All monitoring devices must be correctly calibrated and maintained.

6-WT2	The controlled release of treated/settled stormwater must be conducted in a way and at a rate that does not cause: 1. re-suspension of particles; or 2. erosion of bed or banks of receiving waters; or 3. landscape damage; or 4. ponding of the water; or

	5. vegetation damage.
6-WT3	A liner system must be installed and maintained to: 1. prevent release of contaminants, including leachate, to land and waters; and 2. prevent subsurface migration of landfill gas from the landfill unit.
6-WT4	A leachate and landfill gas condensate collection system must be designed by an appropriately qualified person and installed and maintained to: 1. collect leachate and landfill gas condensate generated in the landfill unit; 2. convey the collected leachate out of the landfill unit to an appropriate leachate storage facility; and 3. minimise the height of the leachate above the liner system to a maximum level of 300mm.
6-WT5	Leachate must be stored in the leachate storage facility and be: (a) recirculated through a landfill unit; or (b) treated for lawful disposal or reuse; or (c) disposed of at a facility that is approved to receive such waste; and (d) leachate must not be used for ERA 53.
6-WT6	**Groundwater Monitoring** A groundwater monitoring network must be installed for each landfill cell and for the regulated waste storage and treatment facilities. The network must be: (i) developed by a person possessing appropriate qualifications and experience in the fields of hydrogeology and groundwater monitoring program design to be able to competently make recommendations about these matters; (ii) supported by a Routine Groundwater Monitoring Program, where the quality of groundwater is monitored and recorded to detect any possible release(s) of contaminants; (iii) established so that a sufficient number of “bore(s) of compliance” are located not more than 150 metres from the landfill cell or the boundary of the landfill facility whichever is the closest (where “bores of compliance” are installed at locations and depths to yield representative groundwater samples from the uppermost aquifer); (iv) located such that groundwater monitoring bores are referenced to horizontal coordinates accurate to 1.0 metre; (v) installed such that each groundwater monitoring bore is fitted with a locked cap at all times other than at the time of sampling; and (vi) maintained in an operative condition and be reasonably accessible at all times to an authorised person.
6-WT7	The groundwater monitoring network of monitoring bores must establish: (i) background groundwater quality in hydraulically up-gradient or background bore(s) that have not been affected by any potential leakage of contaminants to groundwater from the place to which this environmental authority relates;

	(ii) the quality of groundwater down gradient of any potential leakage of contaminants to groundwater from the place to which this environmental authority relates including groundwater passing the relevant bore(s) of compliance; (iii) baseline groundwater water quality monitoring, at least, of water quality characteristics prior to the use of any landfill cell(s) served by the groundwater monitoring network(s) and at the locations and depths defined by the groundwater monitoring network; (iv) whether or not there has been any statistically significant increase over background values identified in the Routine Groundwater Monitoring Program at locations hydraulically down gradient of the landfill facility.
6-WT8	**Recirculated Leachate Monitoring** The holder of this environmental authority must carry out a leachate quality and quantity monitoring program for the leachate generated and recirculated at the place to which this environmental authority relates subject to: (i) leachate quality monitoring must be undertaken at least once annually in the event of any leachate recirculation to the landfill cell(s); (ii) the quantity of recirculated leachate must be measured and recorded annually, flow rate multiplied by pump time is appropriate for calculations; (iii) the level of leachate above the top of the leachate sump perimeter must be measured and recorded at least twice every seven days; (iv) daily rainfall or rainfall events (if an event is longer than daily) must be measured and recorded for the place to which this environmental authority relates; and (v) the Leachate Monitoring Program must be undertaken for, at least, the following water quality characteristics:

1. Ammonia (as N)	10. pH
2. Bicarbonate(HCO3)	11. Potassium
3. Calcium	12. Sodium
4. Chloride	13. Sulphate
5. Iron (total)	14. specific conductance
6. Lead	15. Total Organic Carbon (TOC)
7. Zinc	16. Chemical Oxygen Demand (COD)
8. Nitrate (as N)	17. Biological Oxygen Demand (BOD)
9. Total Organic Halogen (TOX)	18. Total Dissolved Solids (TDS)

Agency Interest: Noise	
Condition number	**Condition:**
6-N1	Noise from the activity must not exceed the levels identified in *Table - Noise limits* when measured in accordance with the associated monitoring requirements.
6-N2	In the event of a complaint about noise that constitutes an intrusive noise being made to the administering authority, that the administering authority considers is not frivolous or vexatious, then

	the emission of noise from the place to which this environmental authority relates must not result in levels greater than those specified in *Table- Noise limits*.

Table – Noise limits

NOISE LIMITS AT A NOISE SENSITIVE PLACE	
Period	***Noise Level at a Noise Sensitive Place Measured as the Adjusted Maximum Sound Pressure Level*** $L_{Amax, adj T}$
7 am - 6 pm	Background noise level plus 5 dB(A)
6 pm - 10 pm	Background noise level plus 5 dB(A)
10 pm - 7 am	Background noise level plus 3 dB(A)
NOISE LIMITS AT A COMMERCIAL PLACE	
Period	***Noise Level at a Commercial Place measured as the Adjusted Maximum Sound Pressure Level*** $L_{Amax, adj T}$
7 am - 6 pm	Background noise level plus 10 dB(A)
6 pm - 10 pm	Background noise level plus 10 dB(A)
10 pm - 7 am	Background noise level plus 8 dB(A)

Associated monitoring requirements

1. All monitoring devices must be correctly calibrated and maintained.
2. Any monitoring must be in accordance with the most recent version of the administering authority's Noise Measurement Manual.
3. Any monitoring of noise emissions from the activity must be undertaken when the activity is in operation.
4. Monitoring and recording the noise levels from the activity must be undertaken for the following descriptors, characteristics and conditions:
    (i) $L_{Amax, adj T}$;
    (ii) $L_{Abg, T}$ or $L_{A90, T}$;
    (iii) $L_{AN,T}$ (where N equals statistical levels of 1, 10, 50, 90 and 99);
    (iv) the level and frequency of occurrence of impulsive or tonal noise;
    (v) atmospheric conditions including temperature, relative humidity and wind speed and direction; and
    (vi) effects due to extraneous factors such as traffic noise.
5. In conjunction with the measurement and recording of the noise, the following parameters and conditions must be recorded:
    (i) location of sampling point(s);
    (ii) date sample(s) taken; and
    (iii) time sample(s) taken.

Agency Interest: Waste Management	
Condition number	**Condition:**
6-W1	Only the following waste streams can be received at the site: (i) asbestos (all chemical forms); (ii) shredded tyres; (iii) fish processing wastes; (iv) food processing wastes; (v) poultry processing wastes; (vi) abattoir effluent; (vii) grease interceptor trap effluent and residues (organic waste only); (viii) infectious substances that have been rendered non-infectious and unrecognisable; (ix) material or equipment contaminated with infectious substances (properly and effectively treated to render them non-infectious); (x) untreated solid pharmaceutical products; (xi) dewatered bacterial sludge (septic tank and sewage); (xii) chemically fixed regulated waste streams that have satisfied the contaminant testing regimes in this environmental authority concerning total contaminant levels and leachable contaminant levels; (xiii) waste and contaminated soil accepted in accordance with condition 6-W5.
6-W2	The following waste streams must not be permitted to be placed at the landfill facility at any time: 1. liquid or semiliquid waste, other than: a. liquid or semi-liquid waste which has been produced in the carrying out of the activity; b. liquid or semi-liquid waste that is incidental to, and commingled with, the permitted waste streams; c. biodegradable liquescent organic waste. 2. hot ash; 3. material that is smouldering or aflame; 4. material containing a substance which is ignitable, corrosive, reactive or toxic material (other than materials containing a toxic substance from domestic premises); 5. Other regulated wastes or contaminated soils unless this material is to be deposited into a dedicated monocell with a written approval of the administering authority. The monocell's design and construction must be certified by an appropriately qualified person. ***NOTE:*** *the following information is to be recorded in relation to the deposition of wastes within a monocell:* *a. type of waste;* *b. quantity of waste;* *c. date of deposition;*

	d. source of waste; *e. location and depth of waste within the monocell.* 6. all radioactive wastes and any soils contaminated by radioactive material, unless otherwise approved under the *Radiation Safety Act 1999*; 7. an explosive; 8. ammunition, other than ammunition that no longer contains explosives, pyrotechnics or propellants apart from trace residues that are no longer capable of supporting combustion or an explosive reaction.
6-W3	Deposited waste must be covered as soon as practicable to limit stormwater infiltration, prevent exposure of waste and prevent issues arising from vectors and pest species.
6-W4	Excepting combustion of landfill gas, waste must not be burnt.
6-W5	Waste and any contaminated soil disposed of at the premises to which this environmental authority relates: 1. must be accepted subject to effectively implementing risk assessment practices and procedures for contaminant testing that ensure that the material accepted complies with the maximum contaminant levels and the allowable leaching contaminant levels prescribed in *Table — Maximum contaminant levels in waste and contaminated soils* and *Table — Allowable leaching contaminant levels in toxic waste and contaminated soil* respectively; and 2. if the contaminated soil is used as coverage material, contaminant levels must not exceed the maximum concentration limits in *Table — Maximum total contaminant levels in soils used as cover material* and *Table — Allowable leaching contaminant levels in soils used as cover material* and must not cause contaminated stormwater release.

Table — Maximum contaminant levels in waste and contaminated soils

CONTAMINANT	MAXIMUM CONTAMINANT LEVEL (mg/kg)
Monocyclic Aromatic Hydrocarbons(MAHs)	
Benzene	20
Ethyl Benzene	1000
Toluene	600
Xylene	500
Total MAH	1 000
Polycyclic Aromatic Hydrocarbons (PAHs)	
Total PAHs	1 000
Phenolic compounds	

Non-halogenated compounds	
Phenol	250
m-cresol	500
o-cresol	500
p-cresol	500
Total non-halogenated phenol	500
Halogenated phenols	
Chlorophenol	5
Trichlorophenol	20
Pentachlorophenol	20
Total halogenated phenol	20
Chlorinated Hydrocarbons	
Chlorinated Aliphatic Compounds	
Carbon tetrachloride	10
1,2 Dichloroethane	20
1,1 Dichloroethene	1
Tetrachloroethene	20
Trichloroethene	25
Total chlorinated aliphatic compounds	50
Chlorinated Aromatic Compounds	
Chlorobenzene	200
Hexachlorobenzene	1
Total Chlorinated Aromatic compounds	200
Pesticides	
Total organochlorine	50
Total herbicides	50
Total carbamates	50

Total organophosphorus	50
Petroleum Hydrocarbons	
Total petroleum hydrocarbons(C6-C9)	1 000
Total petroleum hydrocarbons(C10-C14)	10 000
Total petroleum hydrocarbons(C15-C28)	50 000
Total petroleum hydrocarbons(C29-C36)	50 000
Non Scheduled Solid Polychlorinated Biphenyls (PCBs)	50
Tributyltin	10

Table — Allowable leaching contaminant levels in toxic waste and contaminated soil

CONTAMINANT	ALLOWABLE LEACHING CONTAMINANT LEVELS (mg/L)
Non Specific Contaminants	
Biochemical Oxygen Demand	20 000
Total Organic Carbon	10 000
Petroleum Hydrocarbons	50
Metals/Non-Metals	
Antimony	5.0
Arsenic	5.0
Barium	100.0
Cadmium	0.5
Chromium	5.0
Cobalt	5.0
Copper	200.0
Lead	5.0
Mercury	0.1
Molybdenum	5.0
Nickel	5.0

Selenium	1.0
Silver	10.0
Thallium	1.0
Tin	3.0
Vanadium	5.0
Zinc	500.0
Inorganic Anions	
Bromide	50.0
Chloride	6 000
Cyanide (total)	8
Fluoride	150.0
Sulphate	50 000
Nitrate	5 000
Monocyclic Aromatic Hydrocarbons (MAHs)	
Benzene	1.0
Ethyl benzene	50.0
Toluene	80.0
Xylene	60.0
Total MAHs	80.0
Polycyclic Aromatic Hydrocarbons (PAHs)	
Anthracene	0.7
Benz (a) anthracene	0.05
Benz (c) phenanthrene	0.05
Benzo (a) pyrene	0.02
Benzo (b) fluoranthene	0.05
Benzo (k) fluoranthene	0.05
Chrysene	0.1

Dibenz (a,h) anthracene	0.02
Dibenz (a,h) pyrene	0.1
Dimethylbenz (a) anthracene	0.05
Fluoranthene	0.2
Indeno (1,2,3-cd) pyrene	0.1
Naphthalene	0.7
Phenanthrene	0.1
Pyrene	0.7
Total PAHs	1.0
Phenolic Contaminants	
Non-halogenated compounds	
Phenol	10.0
m-Cresol	20.0
o-Cresol	20.0
p-Cresol	20.0
Halogenated phenols	
Chlorophenol	0.1
Trichlorophenol	1.0
Pentachlorophenol	1.0
Chlorinated Hydrocarbons	
Chlorinated Aliphatic Compounds	
Carbon tetrachloride	0.3
1,2 Dichloroethane	1.0
1,1 Dichloroethene	0.03
Tetrachloroethene	1.0
Trichloroethene	3.0
Chlorinated Aromatic Compounds	

Chlorobenzene(total)	30.0
Hexachlorobenzene	0.02
Pesticides	
Organochlorine pesticides	
Aldrin	0.03
Chlordane	0.1
Dieldrin	0.03
DDT	2
Endrin	0.03
Heptachlor	0.03
Lindane	2
Methoxychlor	30
Toxaphene	0.05
Herbicides	
2,4-D	3
2,4-DB	2.0
MCPA	2.0
2,4,5 -T	10
Carbamates	
Carbaryl	3
Carbofuran	1
Organophosphorus pesticides	
Diazinon	0.3
Parathion	1
Methyl Parathion	10
Fluorinated organic compounds	

Total Fluorinated organic compounds	0.05
Tributyltin	0.4

Note: *For any waste or soil contaminated by radioactive material, the gross alpha and gross beta activity concentration in the Toxicity Characteristic Leaching Procedure (TCLP) extracts from the material are no more than 100 times the concentrations for the screening of gross alpha and gross beta activity concentrations specified in the National Health and Medical Research Council (NHMRC) Australian Drinking Water Guidelines, 2011.*

Table — Maximum total contaminant levels in soils used as cover material (note: this material is not suitable for final capping)

SUBSTANCE	**MAXIMUM CONTAMINANT LEVELS IN SOILS (mg/kg)**
Arsenic (total)	200
Beryllium	40
Cadmium	40
Chromium (iii)	240 000
Chromium (vi)	200
Copper	2000
Lead	600
Manganese	3000
Methyl Mercury	20
Mercury (inorganic)	30
Nickel	600
Zinc	14000
Monocyclic Aromatic Hydrocarbons (MAHs)	
Benzene	10
Ethyl Benzene	500
Toluene	300
Xylene	250
Total MAHs	500
Polycyclic Aromatic Hydrocarbons (PAHs)	

Total PAHs	500
Phenolic Contaminants	
Non halogenated compounds	
Phenol	100
m-cresol	250
o-cresol	250
p-cresol	250
Total non-halogenated phenols	250
Halogenated phenols	
Chlorophenol	1
Trichlorophenol	5
Pentachlorophenol	5
Total halogenated phenol	5
Chlorinated Hydrocarbons	
Chlorinated Aliphatic Compounds	
Carbon tetrachloride	5
1,2 Dichloroethane	10
1,1 Dichloroethene	1
Tetrachloroethene	10
Trichloroethene	25
Total chlorinated aliphatic compounds	50
Chlorinated Aromatic Compounds	
Chlorobenzene	100
Hexachlorobenzene	1
Total Chlorinated Aromatic compounds	100
Pesticides	
Total organochlorine	5

Total herbicides	25
Total carbamates	25
Total organophosphorus	10
Petroleum Hydrocarbons	
Total petroleum hydrocarbons(C6-C9)	500
Total petroleum hydrocarbons(C10-C14)	5 000
Total petroleum hydrocarbons(C15-C28)	10 000
Total petroleum hydrocarbons(C29-C36)	10 000
PFOS (Perfluoro-octane sulfonate)	**6**
PFOA (Perfluoro acid)	**16**
Total Fluorinated organic compounds (not including PFOS & PFOA)	**10**

Table — Allowable leaching contaminant levels in soils used as cover material (note: this material is not suitable for final capping)

CONTAMINANT ANALYSIS	ALLOWABLE LEACHING CONTAMINANT LEVELS (mg/L)
Non Specific Contaminants	
Biochemical Oxygen Demand	20 000
Total 0rganic Carbon	10 000
Petroleum Hydrocarbons	25
Microtox LC50	** No levels set at this time*
Metals/Non-Metals	
Antimony	0.5
Arsenic	0.5
Barium	10.0
Cadmium	0.05
Chromium	0.5
Cobalt	0.5

Copper	10.0
Lead	0.5
Mercury	0.01
Molybdenum	0.1
Nickel	0.5
Selenium	0.1
Silver	0.5
Thallium	0.1
Tin	0.3
Vanadium	0.5
Zinc	50.0
Inorganic Anions	
Bromide	5.0
Chloride	6 000
Cyanide (total)	1.0
Fluoride	15.0
Sulphate	2 500
Nitrate	100.0
Monocyclic Aromatic Hydrocarbons (MAHs)	
Benzene	0.1
Ethyl benzene	5.0
Toluene	3.0
Xylene	2.0
Total MAH	5.0
Anthracene	0.07
Benz (a) anthracene	0.005
Benz (c) phenanthrene	0.005

Benzo (a) pyrene	0.002
Benzo (b) fluoranthene	0.005
Benzo (k) fluoranthene	0.005
Chrysene	0.10
Dibenz (a,h) anthracene	0.002
Dibenz (a,h) pyrene	0.01
Dimethylbenz (a) anthracene	0.005
Fluoranthene	0.02
Indeno (1,2,3-cd) pyrene	0.01
Naphthalene	0.07
Phenanthrene	0.01
Pyrene	0.07
Total PAHs	0.1
Phenolic Contaminants	
Non-halogenated compounds	
Phenol	1.0
m-Cresol	2.0
o-Cresol	2.0
p-Cresol	2.0
Halogenated phenols	
Chlorophenol	0.01
Trichlorophenol	0.1
Pentachlorophenol	0.1
Chlorinated Hydrocarbons	
Chlorinated Aliphatic Compounds	
Carbon tetrachloride	0.03
1,2 Dichloroethane	0.1

1,1 Dichloroethene	0.003
Tetrachloroethene	0.1
Trichloroethene	0.3
Chlorinated Aromatic Compounds	
Chlorobenzene(total)	1.0
Hexachlorobenzene	0.002
Pesticides	
Organochlorine pesticides	
Aldrin	0.001
Chlordane	0.006
Chlorpyrifos	0.01
Dieldrin	0.001
DDT	0.003
Endrin	0.001
Heptachlor	0.003
Lindane	0.1
Methoxychlor	0.1
Toxaphene	0.005
Herbicides	
2,4-D	0.1
2,4-DB	0.2
MCPA	0.2
2,4,5 -T	0.002
Carbamates	
Carbaryl	0.06
Carbofuran	0.03
Organophosphorus pesticides	

	Diazinon	0.01
	Parathion	0.03
	Methyl Parathion	0.006
	Triazines	
	Atrazine	0.01
	Simazine	0.01
	Organotin	
	Tributyltin	0.002
6-W6	The disposal rate of waste and contaminated soils into a monocell must not exceed ten (10) percent by mass of the total waste interred in the landfill facility averaged over a five (5) year period.	
6-W7	All chemical forms of asbestos waste must be: (i) disposed to a designated asbestos landfill unit; (ii) confined to a designated asbestos landfill unit where no excavation takes place following the initial disposal of asbestos waste within that designated asbestos landfill unit; (iii) placed at the bottom of the working face in the designated asbestos landfill unit and immediately covered with a minimum of 200mm of consolidated earth or equivalent cover material; and (iv) contained within a final designated asbestos landfill unit at a minimum distance of two (2) metres from the surface and flanks of the landfill unit, excluding any final cover system (where final designated asbestos landfill unit means that deposition to the landfill unit has ceased).	
6-W8	The following waste must be handled and disposed of as a special burial of waste: (i) infectious substances properly and effectively treated to render them non-infectious; (ii) material or equipment contaminated with infectious substances properly and effectively treated to render them non-infectious; (iii) untreated solid pharmaceutical products except any drugs or poisons as cited in the Standards for Uniform Scheduling of Drugs and Poisons (Schedules 8 and 9 drugs as per the "Poisons (Health and Drugs) Regulation 1996"); and (iv) waste, which if not buried as soon as practicable, would be likely to cause environmental harm when placed in an exposed position (for example, odorous putrescible waste, chemically fixed waste streams excluding alkaline stabilised sewage sludge).	
6-W9	**Record Keeping - Asbestos and other waste requiring special burial** The holder of the environmental authority must record at least the following information in relation to the burial of asbestos waste and the special burial of wastes: (i) type of waste;	

	(ii) quantity of waste; (iii) date of deposition; (iv) source of waste; and (v) if the waste is fibrous asbestos and/or mixed asbestos waste, the accurate location (accuracy not less than 0.5 metre for depth and area coordinates) for the designated asbestos landfill unit(s).
6-W10	Any soil contaminated by radioactive material must be contained within the landfill unit at a minimum distance of two (2) metres from the surface and flanks of the landfill unit, excluding any final cover system environmental authority.
6-W11	When the deposition of waste to the landfill unit ceases, a final capping system to the landfill unit must be designed by an appropriately qualified person and installed to minimise: 1. infiltration of water into the landfill unit and water ponding on the surface; and 2. the likelihood of any erosion occurring to either the final capping system or the landfilled materials. A final capping system is not required where the deposition of waste to a landfill unit ceases temporarily for the purpose of using an alternative working face.
6-W12	Land that has been disturbed for activities conducted under this environmental authority must be rehabilitated in a manner such that: 1. suitable species of vegetation for the location are established and sustained for earthen surfaces 2. potential for erosion is minimised 3. the quality of water, including seepage, released from the site does not cause environmental harm 4. potential for environmental nuisance caused by dust is minimised 5. the water quality of any residual water body does not have potential to cause environmental harm 6. the final landform is stable and protects public safety 7. the contaminant concentrations within the final capping layer are appropriate for the final land use and in accordance with the latest version of 'National Environmental Protection (Assessment of Soil Contamination) Measure.'
6-W13	Following cessation of deposition of waste in the landfill unit, post-closure care of the landfill unit must be conducted for a period of 30 years or until the administering authority determines, on the basis of correct information, that the landfill unit and surrounding site are stable and that no release of waste materials, leachate, landfill gas or other contaminants that may cause environmental harm is likely.
6-W14	The program of post-closure care implemented must be effective in preventing and/or minimising the likelihood of environmental harm being caused. The program must include measures to: 1. maintain the structural integrity and effectiveness of the final capping system; 2. maintain and operate the leachate collection system; 3. maintain the groundwater monitoring system and monitor quality of groundwater at a frequency sufficient to detect any release of contaminants to groundwater;

	4. maintain and operate the landfill gas monitoring system; and 5. maintain and operate the landfill gas collection system.
6-W15	A site management plan pursuant to Chapter 7, Part 8, Division 5 of the *Environmental Protection Act 1994* must be developed and provided to the administering authority at least 12 months before the expected final receipt of waste in the landfill unit. The site management plan must include, but is not to be limited to, the future land use and actions intended to taken for compliance with the closure and post-closure care requirements of this approval.

Definitions

Where a word or phrase in this document is defined in this Schedule or within the document, it has its corresponding meaning. Where a word or phrase in this document is not defined in this Schedule, it has the meaning given to it in (in order of priority):

- the *Environmental Protection Act 1994* (EP Act), its regulations or its environmental protection policies;
- the *Acts Interpretation Act 1954*;
- the Macquarie Dictionary (taking account of the context in which the word or phrase is used in this document).

°C means degrees Celsius.

µg/m^3 means micrograms per cubic metre.

Activity means the environmentally relevant activity or activities to which the environmental authority relates.

Act means the *Environmental Protection Act 1994*.

Administering authority means the Chief Executive administering the *Environmental Protection Act 1994*.

Aerobic conditions is demonstrated by stored leachate having a dissolved oxygen concentration of ≥1 mg/L as measured in-situ at a minimum of three different depths (top, middle and bottom) across the entire water column.

Appropriately qualified person(s) means a person or persons who has professional qualifications, training, skills and experience relevant to the environmental authority requirement and can give authoritative assessment, advice and analysis in relation to the environmental authority requirement using the relevant protocols, standards, methods or literature.

Approved place means the site situated at 55 Champions Way and Ebenezer Road, Willowbank QLD 4306 (Lot 3 Plan SP167885 and Lot 8 Plan RP24574).

Authorised place means the place authorised under this environmental authority for the carrying out of the specified environmentally relevant activities.

Background noise means $L_{A90,\,T}$ being the A-weighted sound pressure level exceeded for 90 percent of the time period not less than 15 minutes, using Fast response.

Biopile means a system of composting involving aeration of horizontally extended piles or organic material by delivery of air from the base of the windrow through slotted ventilation or perforated piping.

bonded asbestos waste means an asbestos waste in which the asbestos is tightly encapsulated in a cementitious or resinous matrix.

Boundary means within one metre of the cadastral boundary of the site.

Bulking agent includes wood chips or woody green waste.

C:N ratio means the ratio of elemental carbon (C) to elemental nitrogen (N) by weight in organic material.

Clay lined means a landfill lined with compacted clay at least 600 mm thick achieving a maximum permeability of 1 x 10^{-9} metres per second or alternate such as an engineered geosynthetic agreed in writing as equivalent in performance by the **administering authority**.

Commercial place means a place used as a workplace, an office or for business or commercial purposes and includes a place within the curtilage of such a place reasonably used by persons at that place.

Commissioning means the initial receipt of waste and materials at the approved place for storage and treatment.

Composting material refers to waste or other material received on the site, which is mixed and undergoing a composting process until it becomes finished compost.

Contained treatment pad runoff water means water that is contained in a stormwater control area as depicted in the plan titled Ti Tree Bioenergy Facility Proposed Waste Treatment Facility Stormwater Management Plan, Drawing Number TT645-00-01, Revision D, comprising Attachment 4 of this approval.

Contaminant as defined under section 11 of the *Environmental Protection Act 1994.*

DDD means dichlorodiphenyldichloroethane.

DDE means dichlorodiphenyldichloroethylene.

DDT means dichlorodiphenyltrichloroethane.

Designated asbestos landfill unit means a surveyed area of the landfill unit where asbestos is disposed of.

Dewatered means the material does not yield free liquids.

Disturbed area/s include areas:

- That are susceptible to erosion; and/or
- That are contaminated by the activity; and/or

Upon which stockpiles of soil or other materials are located.

Double lined means a landfill lined with compacted clay at least 600mm thick achieving a maximum permeability of $1x10^{-9}$ metres per second overlain with 1.5mm HDPE synthetic liner or alternate double liner system agreed in writing as equivalent in performance by the administering authority.

Drum means any individual container for holding a chemical and having a capacity of not more than 250 litres (L).

Dwelling means any of the following structures or vehicles that is principally used as a residence –

- a house, unit, motel, nursing home or other building or part of a building;
- a caravan, mobile home or other vehicle or structure on land;
- a water craft in a marina.

Emergency as defined under section 466B of the *Environmental Protection Act 1994.*

Environmental harm as defined under section 14 of the *Environmental Protection Act 1994.*

Environmental nuisance as defined under Chapter 1 of the *Environmental Protection Act 1994.*

Environmental value as defined under Chapter 1 of the *Environmental Protection Act 1994.*

Feedstock means the material/s used or intended to be used for organic material processing.

Fibrous asbestos waste means an asbestos waste in which asbestos is not tightly encapsulated in a matrix.

Finished compost means an organic product/s that has undergone controlled aerobic and thermophilic biological transformation through the composting process to achieve pasteurisation.

Free liquid means liquid which readily separates from the solid portion of a waste under ambient temperature and pressure as determined by Method 9095 (Paint Filter Liquids Test) described in “US EPA: Free Liquids (Paint Filter)” Federal Register, Vol. 50, No. 83, page 18370, April 30, 1985.

General waste means waste other than regulated waste.

Generator means a person who sells, or gives away, or otherwise provides, a feedstock.

Geotechnical stability of a landfill cell means a situation where instability related to the excessive settlement and subsidence caused by decomposition and consolidation of the wastes deposited in the landfill cell, and sliding instability of the cell slope has ceased.

Green waste means waste that is grass cuttings, trees, bushes, shrubs, material lopped from trees, untreated timber or other waste that is similar in nature.

Groundwater means water that occurs naturally in, or is introduced artificially into, an aquifer.

Groundwater monitoring system means a system of groundwater monitoring devices, such as monitoring bores, used to provide data in respect to the level and quality of groundwater in the uppermost aquifer where the location of the groundwater monitoring devices is such that comparisons of groundwater quality and groundwater level can be made between groundwater flowing from beneath the site (down-gradient flow) of the activity and groundwater flowing towards the site of the activity (up-gradient flow).

HDPE means high density polyethylene.

Impervious barrier means a barrier with a thickness of at least 600 mm with an in-situ permeability (K) of less than 10^{-9} ms^{-1}.

Intrusive noise means noise that, because of its frequency, duration, level, tonal characteristics, impulsiveness or vibration -

(a) is clearly audible to, or can be felt by, an individual; and

(b) annoys the individual.

In determining what constitutes “annoyance”, regard must be had to Australian Standard 1055.2 - 1989 Acoustics - Description and Measurement of Environmental Noise Part 2 Application to specific situations.

km/hr means kilometres per hour.

$L_{A\ 1,\ adj,\ 10\ mins}$ means the A-weighted sound pressure level, (adjusted for tonal character and impulsiveness of the sound) exceeded for 1% of any 10 minute measurement period, using Fast response.

$L_{A10,\ 10min}$ means an A-weighted sound pressure level equal to or exceeded for 10% of a 10 minute sample period, measured using fast (“F”) response.

$L_{A\ 10,\ adj,\ 10\ mins}$ means the A-weighted sound pressure level, (adjusted for tonal character and impulsiveness of the sound) exceeded for 10% of any 10 minute measurement period, using Fast response.

$L_{Aeq\ adj,T}$ means the adjusted A weighted equivalent continuous sound pressure level measures on fast response, adjusted for tonality and impulsiveness, during the time period T, where T is measured for a period no less than 15 minutes when the activity is causing a steady state noise, and no shorter than one hour when the approved activity is causing an intermittent noise.

$L_{Aeq,adj,1hr}$ means an A-weighted sound pressure level of a continuous steady sound, adjusted for tonal character, that within a 1 hour period has the same mean square sound pressure of a sound that varies with time.

$L_{Amax\ adj,\ T}$ means the average maximum A-weighted sound pressure level, adjusted for noise character and measured over a time period of not less than 15 minutes, using Fast response.

Land in the "land schedule" of this document means land excluding waters and the atmosphere.

Landfill unit means a discrete area of land or an excavation that receives solid waste.

Landfill facility means land and structures at the site approved used for the disposal of solid waste.

Leachate means a **liquid** that has passed through or emerged from, or is likely to have passed through or emerged from, a material stored, processed or disposed of at the site that contains soluble, suspended or miscible contaminants likely to have been derived from the said material.

Leachate treatment plant includes the following components:

- Membrane Bioreactor (MBR) including
    - Activated sludge process;
    - Pressure membrane process;
    - pH adjustment.
- pH adjustment;
- Antifoam dosing;
- Evaporation;

- Granular Activated Carbon (GAC);
- Cooling Tower including
    - Biocide dosing and pH adjustment;
- Storage vessels:
    - Raw leachate
    - Waste activated sludge
    - UF filtrate
    - Condensate
    - Cooling Tower purge
    - Concentrate
- Sludge dewatering including
    - Screw press.

Liquid means any substance that:

1. has an angle of repose of less than five degrees; or
2. becomes free flowing at or below 60 degrees Celsius or when it is transported; or
3. is not generally capable of being picked up by a spade or shovel.

Lower explosive limit means the lowest percent by volume of a mixture of explosive gases in air that will propagate a flame at 25°C and atmospheric pressure.

Low organic soils means soils contaminated with total petroleum hydrocarbons (TPH) up to and including a maximum of 100,000 mg/kg.

m means metre.

mg/kg means milligram per kilogram.

mg/L means milligrams per litre.

mm means millimetre.

mg/Nm means milligram per normalised metre

m/s means metres per second.

Max$_{LpA,T}$ means the maximum A-weighted sound pressure level measured over a time period T of not less than 15 minutes, using Fast response.

Measures have the broadest interpretation and include plant, equipment, physical objects, bunding, containment systems, monitoring, procedures, actions, directions and competency.

Mixed asbestos waste means an asbestos waste which is a mixture of fibrous and bonded asbestos.

Monitoring in relation to monitoring the impact of an activity on the receiving environment, includes analysing, assessing, examining, inspecting, measuring, modelling or reporting any of the following –

the quantity, quality, characteristics, timing and variability of the release of the contaminant;

the effectiveness of control measures;

characteristics of, and impact on, the receiving environment;

the effectiveness of remedial or rehabilitation measures.

NATA means National Association of Testing Authorities.

Noise sensitive place means any of the following places:

(a) a dwelling;

(b) a library, childcare centre, kindergarten, school, college, university or other educational institution;

(c) a hospital, surgery or other medical institution;

(d) a protected area, or an area identified under a conservation plan as a critical habitat or an area of major interest, under the *Nature Conservation Act 1992*;

(e) a marine park under the *Marine Parks Act 2004*;

(f) a park or garden that is open to the public (whether or not on payment of money) for use other than for sport or organised entertainment.

Noxious means harmful or injurious to health or physical well-being.

Nuisance sensitive place includes –

- a dwelling, residential allotment, mobile home or caravan park, residential marina or other residential premises; or
- a motel, hotel or hostel; or
- a kindergarten, school, university or other educational institution; or
- a medical centre or hospital; or
- a protected area under the *Nature Conservation Act 1992*, the *Marine Parks Act 2004* or a World Heritage Area; or
- a public thoroughfare, park or gardens; or
- a place used as a workplace, an office or for business or commercial purposes and includes a place within the curtilage of such a place reasonably used by persons at that place.

Offensive means causing offence or displeasure; is unreasonably disagreeable to the sense; disgusting, nauseous or repulsive.

Offensive means causing offence or displeasure; is disagreeable to the sense; disgusting, nauseous or repulsive.

Off-site Restricted Use means land use application for public contact sites, urban landscaping, agriculture, forestry, soil and site rehabilitation and landfill disposal.

Off-site Unrestricted Use means land use application for home lawns and gardens, public contact sites, urban landscaping, agriculture, forestry, soil and site rehabilitation and landfill disposal.

On-site Use means land use application for agriculture, forestry, soil and site rehabilitation and landfill disposal.

Pasteurisation means a process whereby organic materials are treated to significantly reduce the numbers of plant and animal pathogens and plant propagules.

PFAS means *per and poly-fluoroalkyl substances.* PFAS short and long naming conventions are as follows (unless otherwise specified by the laboratory):

Short name	Long name
PFOS	Perfluorooctane sulfonic acid
PFHxS	Perfluorohexane sulfonic acid
PFOA	Perfluorooctanoic acid
PFBA	Perfluorobutanoic acid
PFPeA	Perfluoropentanoic acid

PFHxA	Perfluorohexanoic acid
PFHpA	Perfluoroheptanoic acid
PFNA	Perfluorononanoic acid
PFDA	Perfluorodecanoic acid
PFUnDA	Perfluoroundecanoic acid
PFDoDA	Perfluorododecanoic acid
PFTrDA	Perfluorotridecanoic acid
PFTeDA	Perfluorotetradecanoic acid
4:2 FTS	4:2 Fluorotelomer sulfonic acid
6:2 FTS	6:2 Fluorotelomer sulfonic acid
8:2 FTS	8:2 Fluorotelomer sulfonic acid
10:2 FTS	10:2 Fluorotelomer sulfonic acid
PFOSA (or FOSA)	Perfluorooctane sulfonamide
N-MeFOSA	N-Methyl perfluorooctane sulfonamide
N-EtFOSA	N-Ethyl perfluorooctane sulfonamide
N-MeFOSE	N-Methyl perfluorooctane sulfonamido ethanol
N-EtFOSE	N-Ethylperfluorooctane sulfonamido ethanol
N-MeFOSAA	N-Methyl perfluorooctane sulfonamido acetic acid
N-EtFOSAA	N-Ethyl perfluorooctane sulfonamido acetic acid

PFU means plague forming unit.

PM_{TSP} means total suspended particulates.

PM_{10} means particulate matter with an aerodynamic diameter of less than 10µm or equal to (PM_{10}).

ppm means parts per million.

Prescribed water contaminants means contaminants listed within Schedule 10 of the *Environmental Protection Regulation 2019*.

Prohibited material *includes:*

Feedstock Material	Description
Asbestos and asbestos containing materials	
Bilge waters	Sea and fresh water from vessel pump outs.

Biosecurity waste	(a) waste that is goods subject to biosecurity control under the Biosecurity Act 2015 (Cwlth); or (b) goods under the *Biosecurity Act 2015* (Cwlth) that are or were in contact with waste mentioned in paragraph (a).
Dye waste (water based)	By-product from industrial dying processes.
Effluent waste and wastewater	Liquid industrial or domestic effluents and waste streams, including contaminated groundwater and stormwater, except those of known origin and composition solely containing organic material as defined in the definition of environmentally relevant activity organic material processing ERA 53.
Filter cake and presses	Any concentrated solid and semi-solid waste streams from water treatment process (e.g. centrifuge, filter press), excluding material that complies with the requirements of End of Waste Code ENEW07503318.[3]
Filter and ion exchange resin backwash waters	Any backwash and reject water from a filtration (e.g. sand or membrane filter) or ion exchange process, excluding material that complies with the requirements of End of Waste Code ENEW07503318.
Forecourt water	Run off from service station forecourts.
Hide curing effluent	Effluent and wastes from tanneries including, but not limited to, the various steps involved in preparing animal hide e.g. washing for removal of hair, fat removal, chemical treatment.
Leachate waste	A liquid that has passed through, or emerged from, or is likely to have passed through or emerged from, a landfill or from a non-organic waste or contaminated soil deposit.
Materials containing persistent organic pollutants including polybrominated diphenyl ethers (PDBEs), polychlorinated biphenyls (PCBs), polyfluorinated organic compounds[4] and polyaromatic Hydrocarbons (PAHs).	
Materials originating from activities or sites associated with PFAS contamination,[5] except where representative analysis results for the load undertaken in accordance with the PFAS monitoring requirements outlined in condition 3-G4, demonstrates that the load can be accepted to ensure compliance with all conditions of the environmental authority (including finished compost quality characteristic limits).	
Municipal solid waste (excluding segregated compostable organic waste that does not include another prohibited material under this environmental authority).	
Paint and industrial coatings products and wash	Paint and industrial coatings products and water and solvent wash down water containing paint and industrial coatings residues.
Particle board	Any part of an engineered wood panel product, manufactured from wood particles, coated in adhesive resin and pressed together into a finished panel.

[3] Available online at https://environment.des.qld.gov.au/
[4] *Materials containing per and poly-fluoroalkyl substances (PFAS) are considered separately*
[5] Operators should refer to Appendix B of the PFAS NEMP for details of activities associated with PFAS contamination. The PFAS NEMP is available online on the Australian Government Department of Agriculture, Water and Environment website at https://www.environment.gov.au/

Sullage waste (greywater)	Greywater / wastewater from domestic or commercial buildings excluding sewage but including waters drained from showers, sinks and laundries.
Treatment tank sludges and residues	Any treatment tank sludge or residue, excluding sludges and residues containing only plant or animal based organic matter or material that complies with the requirements of End of Waste Code ENEW07503318.
Treated timber waste	Any treated timber waste that does not meet the requirements of End of Waste Code ENEW07607119.
Waste containing restricted stimulation fluids	
Waste known to be contaminated with glass, metal, rubber and coatings that cannot be eliminated though processing	
Waste treated by immobilisation or fixation	
Water based inks	Liquid wastes from ink use or manufacture.
Water and solvent based paints and industrial coatings	Liquid waste paint, including where undiluted.

Protected area means –

- a protected area under the *Nature Conservation Act 1992*; or
- a marine park under the *Marine Parks Act 2004*; or
- a World Heritage Area.

Putrescible waste means waste food or waste animal matter (including dead animals and animal parts), or unstable or untreated bacterial (sewage) sludge, and includes any mixtures of such wastes.

Regulated waste means waste mentioned in Schedule 9 of the *Environmental Protection Regulation 2019* (whether or not it has been treated or immobilised), and includes -

- for an element - any chemical compound containing the element; and
- anything that has contained the waste.

Release of a contaminant into the environment means to:

1. deposit, discharge, emit or disturb the contaminant; and
2. cause or allow the contaminant to be deposited, discharged, emitted or disturbed; and
3. fail to prevent the contaminant from being deposited, discharged emitted or disturbed; and
4. allow the contaminant to escape; and
5. fail to prevent the contaminant from escaping.

Records are documents made or issued in respect of this environmental authority, including contravention notifications, written procedures, analysis results, plans, monitoring reports and monitoring programs required under a condition of this authority.

Restricted stimulation fluids as defined in section 206 of the *Environmental Protection Act 1994.*

Sensitive place includes the following and includes a place within the curtilage of such a place reasonably used by persons at that place:

1. a dwelling, residential allotment, mobile home or caravan park, residential marina or other residential premises; or

2. a motel, hotel or hostel; or
3. a kindergarten, school, university or other educational institution; or
4. a medical centre or hospital; or
5. a protected area under the *Nature Conservation Act 1992*, the *Marine Parks Act 2004* or a World Heritage Area; or
6. park or gardens; or
7. for noise, a place defined as a sensitive receptor for the purposes of the Environmental Protection (Noise) Policy 2008.

Site means land or tidal waters on or in which it is proposed to carry out the development approved under this environmental authority.

Special burial of waste means a disposal method where earth moving equipment pushes the wastes to the bottom of the working face or into an excavated hole, and immediately covers it with earth or other waste material.

Stabilised biosolids means biosolids processed to reduce or eliminate the potential for putrefaction and which, as a result, reduces pathogens, vector attraction and offensive odours.

Tank means any individual container for holding a chemical and having a capacity of more than 250 litres (L).

TCLP means a toxicity characteristic leaching procedure.

Toxicity Characteristic Leaching Procedure (TCLP) means the test described in 'U.S. EPA :Toxicity Characteristic Leaching Procedure (TCLP)' Federal Register 40 CFR, Vol. 51, No. 286, Appendix 2, Part 268, page 40643 or as modified to reflect non-acidic leaching procedures suitable for waste characteristic assessment where co-disposal with putrescibles wastes will not occur.

Treatment process means composting process, bioremediation process, chemical stabilisation or fixation process, acid or alkali neutralisation process or indirect thermal desorption process.

Toxic material means:

1. cytotoxic wastes;
2. drugs and poisons as cited in the Standards for Uniform Scheduling of Drugs and Poisons (Schedules 8 and 9 drugs as per the Poisons (Health and Drugs) Regulation 1996); and
3. any other material that:
    a. has contaminant concentrations in the waste exceeding the allowable levels in *Table - Maximum contaminant levels in waste and contaminated soils*; or
    b. has leaching contaminant levels in the waste when measured in accordance with toxicity characteristic leaching procedure (TCLP), exceeding the concentrations prescribed in *Table Allowable leaching contaminant levels in toxic waste and contaminated soil*.

Uppermost aquifer means the geologic formation nearest to the natural ground surface that is an aquifer. The term includes any aquifers that are likely to be hydraulically interconnected with this aquifer within the landfill facility property boundary.

Waste treatment facility means the facility incorporating all ERAs approved to be carried out under this environmental authority.

Waste operations area means the following areas:

1. waste receiving
2. sorting
3. treating
4. recycling
5. disposal.

Waters includes river, stream, lake, lagoon, pond, swamp, wetland, unconfined surface water, unconfined water, natural or artificial watercourse, bed and bank of any waters, dams, non-tidal or tidal waters (including the sea), stormwater channel, stormwater drain, roadside gutter, stormwater run-off, and groundwater and any part thereof.

Watercourse means a river, creek or stream in which water flows permanently or intermittently-

- in a natural channel, whether artificially improved or not; or
- in an artificial channel that has changed the course of the watercourse.

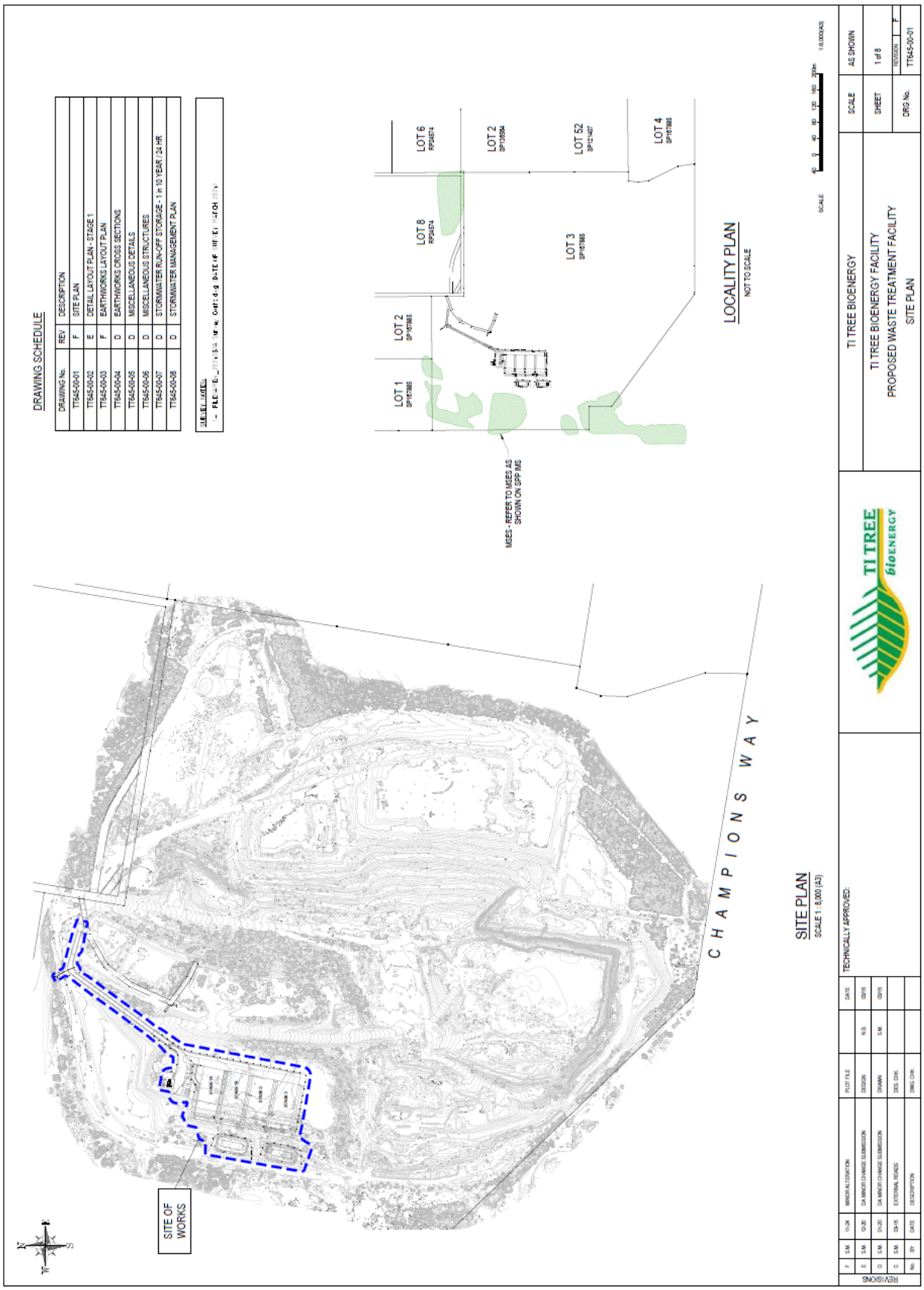
Weed means an invasive plant as defined in the *Biosecurity Act 2014.*

Windrow means a system of composting involving aeration of horizontally extended piles of organic material by mechanical turning (referred to as 'dynamic' or 'turned') or delivery of air from the base of the windrow (referred to as 'biopile').

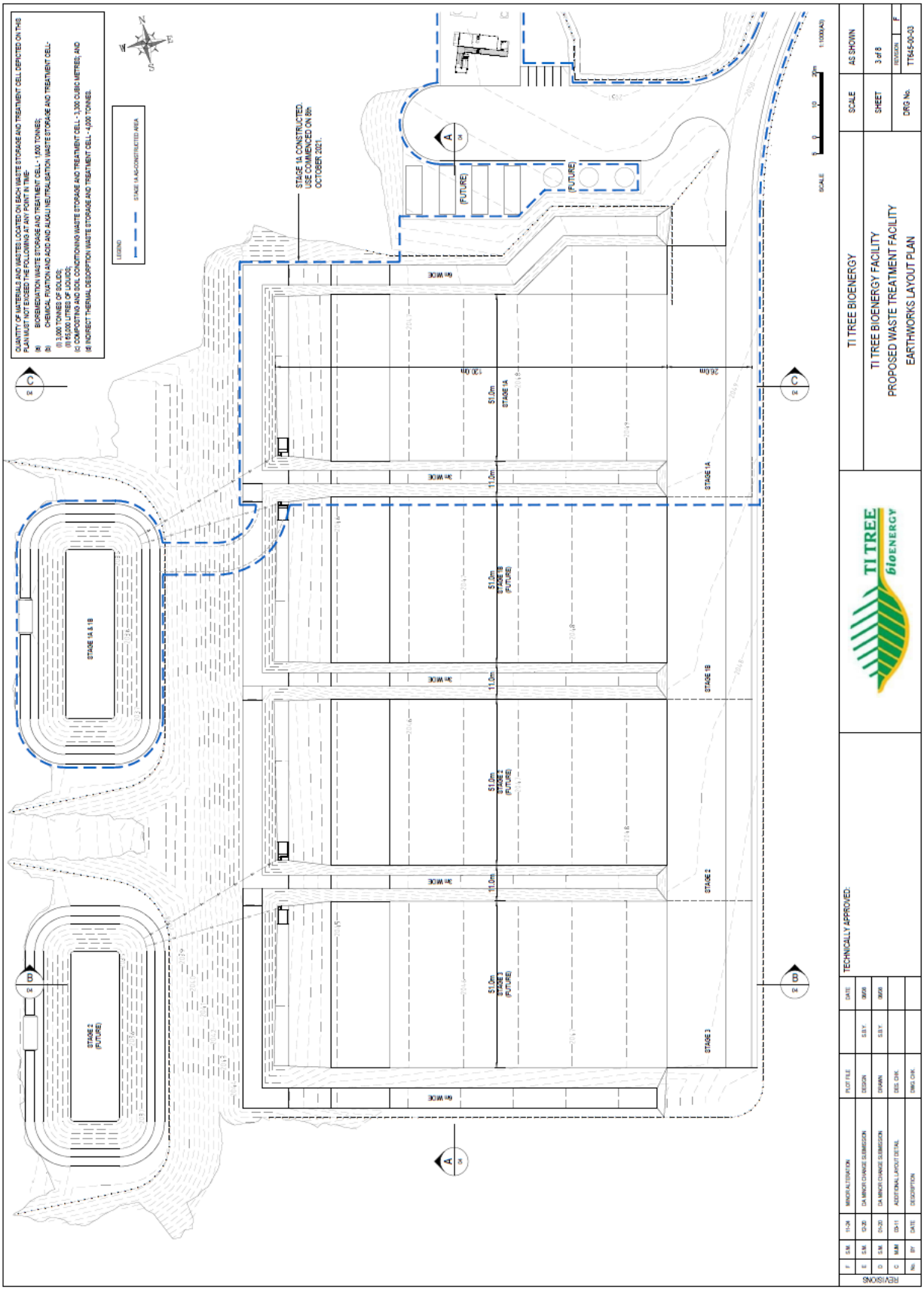
Works or operation means the development approved under this environmental authority.

You means the holder of the environmental authority.

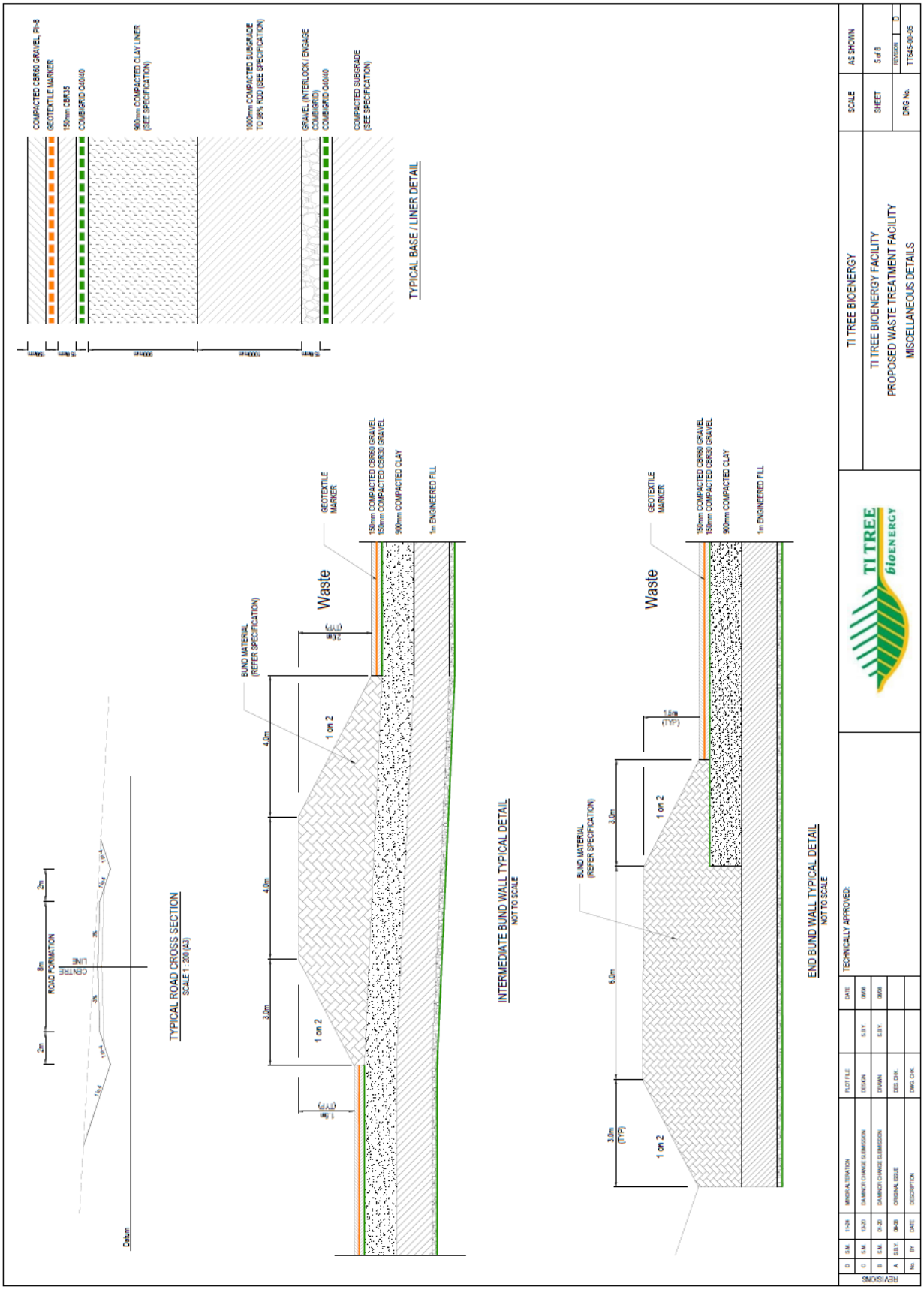
Attachment 1



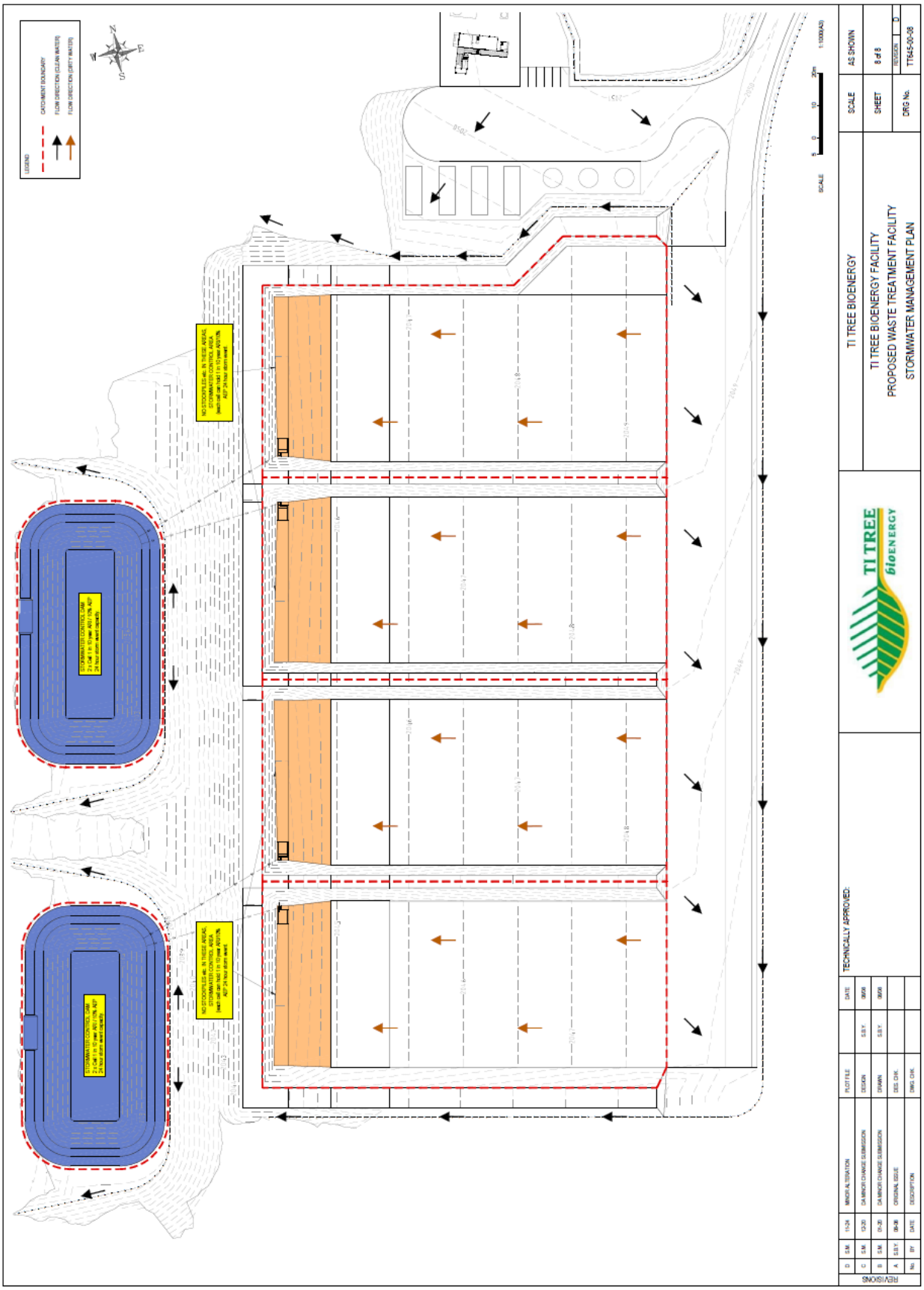
Attachment 2



Attachment 3



Attachment 4



APPENDIX 1

Figure 1. Site Layout Plan of Ti Tree Waste Management Facility by Duggan & Hede Pty Ltd

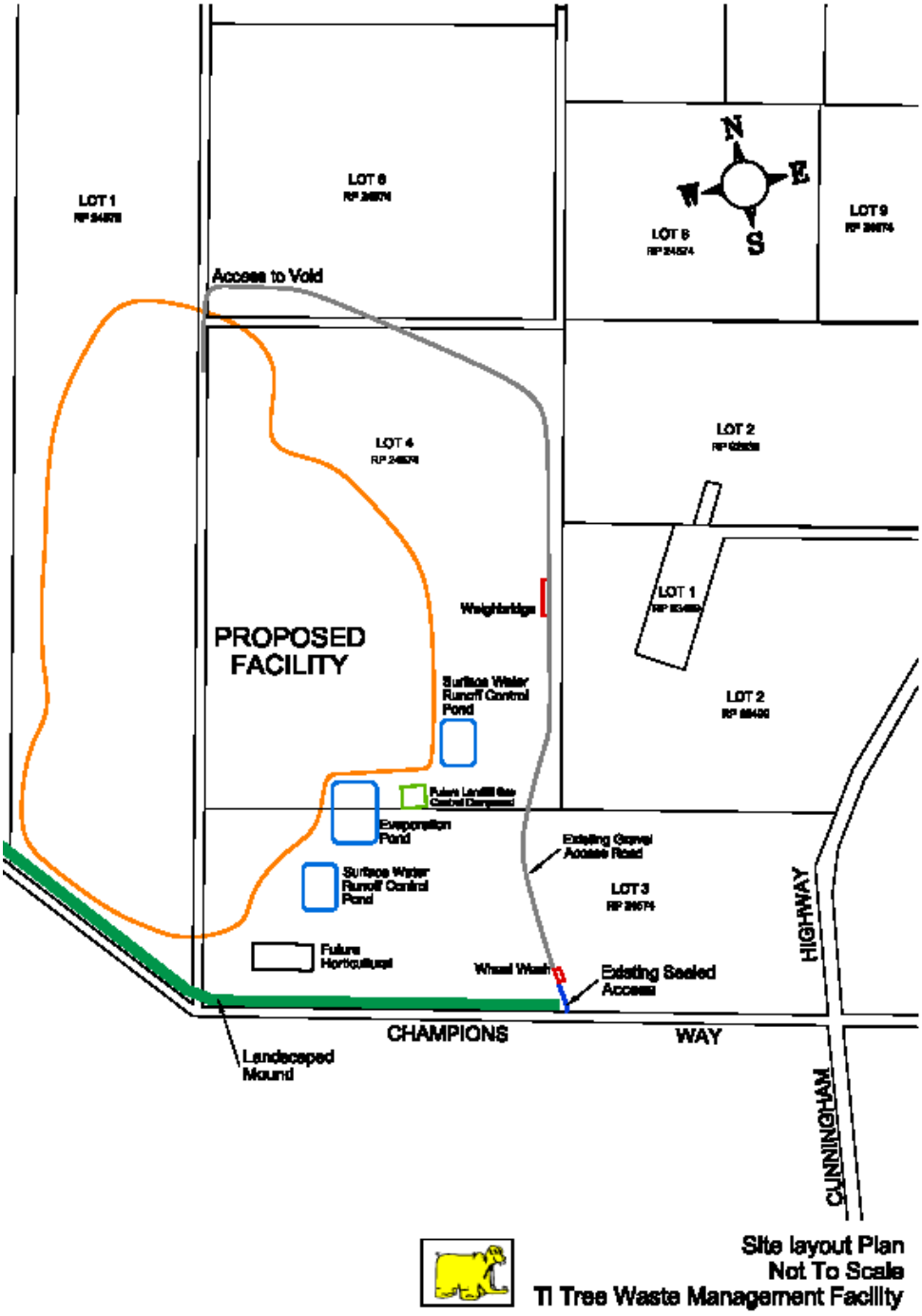
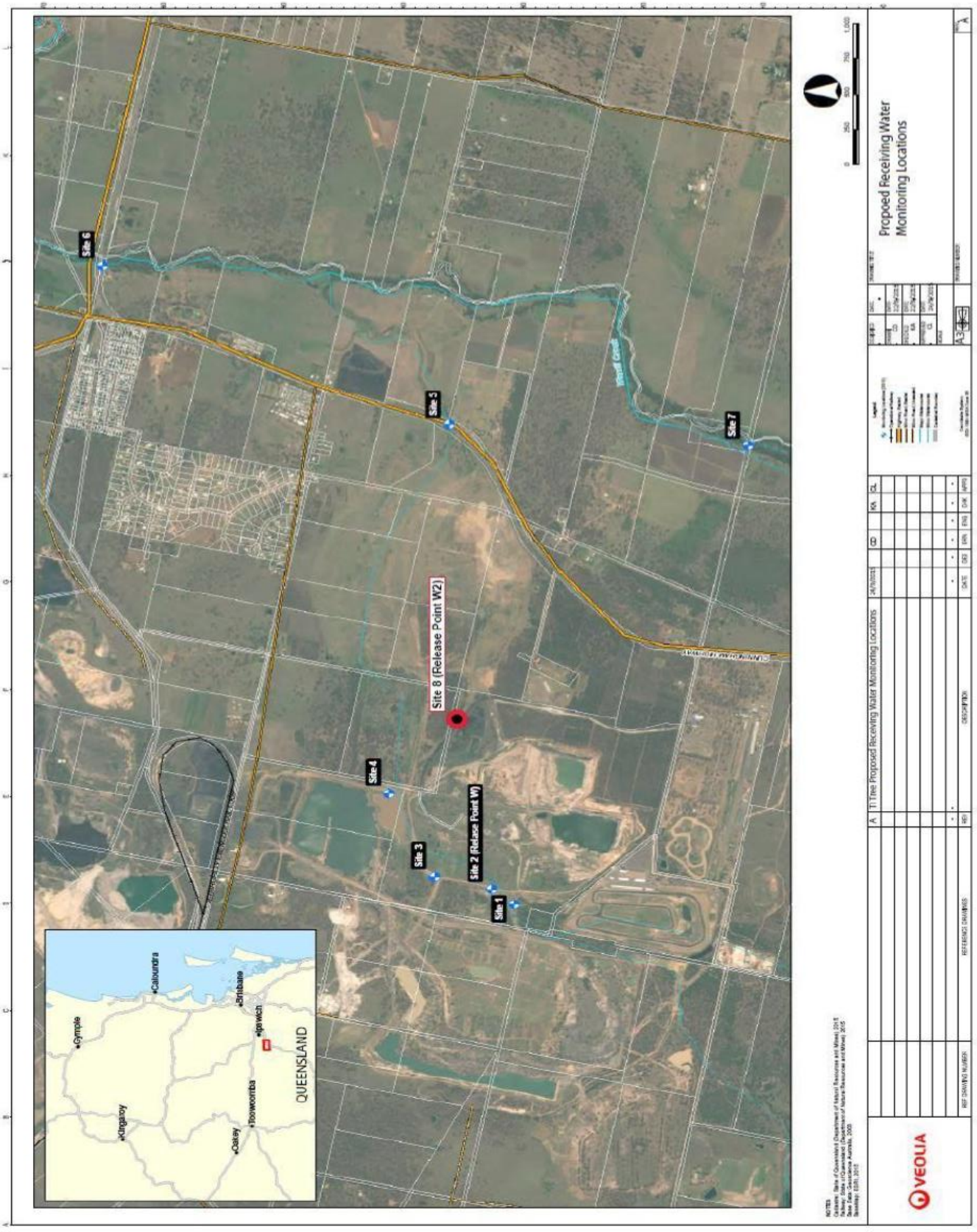


Figure 2. Proposed Receiving Water Monitoring Locations dated 24/09/2015



Schedule 1—Odour rating of composting feedstock

Notes:

- If a feedstock can fit within multiple listings in *Table – Odour rating of compost feedstock*, the most specific listing applies. For example, 'vegetable waste' could be considered 'Food organics' with a high odour rating. However, as 'vegetable waste' is listed as a specific example under 'Food and food processing waste' the applicable odour rating for 'vegetable waste' is medium.

Table – Odour rating of composting feedstock

Feedstock	Examples	Odour Rating
Abattoir waste	Meat processing leftovers, bone material, blood, tallow waste, abattoir waste including animal effluent and residues from meat processing, including abattoir effluent, liquid animal wastes (blood) and sludge	Very high
	Paunch material	High
Animal manure	Horse manure, chicken manure, cow manure, livestock manure, or any manure produced by animals, wastewater from holding yards.	High
Animal waste and animal processing waste	Any dead animals or part/s of dead animals, remains of animals or part/s of remains of animals (e.g. chickens from poultry farms), egg waste, milk waste, mixtures of animal manure and animal bedding organics	Very High
Bark, lawn clippings, leaves, mulch, pruning waste, sawdust, shavings, woodchip and other waste from forest products	Cane and sorghum residues including bagasse, forest mulches, cypress chip, green waste, mill mud[6], pine bark, sawmill residues non-treated (including sawdust, bark, wood chip, shavings etc.), tub ground mulch (from land clearing and forestry waste), peat, seed hulls/husks, straw, and other natural fibrous organics, wood chips (forestry waste and land clearing, household maintenance), wood waste (including untreated pallets, offcuts, boards, stumps and logs); worm castings suitable for unrestricted use	Low
Biosolids	Biosolids that are not stabilised biosolids	Very high
	Stabilised biosolids	Medium
Cardboard and paper waste	Paper mulch	Low
	Paper pulp effluent, paper sludge dewatered	Medium
Compostable polylactic acid (PLA) plastics	Compostable plastics produced in accordance with: (a) AS 47362006 (Biodegradable plastics) or the most recent or replaced version of that standard or (b) AS 5810:2010 (Biodegradable plastics - Biodegradable plastics suitable for home	Low

[6] That meets the Resource quality criteria for the approved use in the Sugar Mill By-Products End of Waste Code (ENEW07359817)

Feedstock	Examples	Odour Rating
	composting) or the most recent or replaced version of that standard.	
A substance used for manufacturing fertiliser for agricultural, horticultural or garden use	Ammonium Nitrate, dewatered fertiliser sludge	High
	Fertiliser water and fertiliser washings, stormwater from fertiliser manufacturing plants containing fertiliser wash water	Medium
Fish processing waste	Fish bones and other fish remains/leftovers, wastewater from fish processing	Very high
Food and food processing waste	Expired/past used by date non-protein based food from supermarkets, expired beer, vegetable oil wastes and starches, vegetable waste, yeast waste, food processing effluent (wastewater) and solids (including sludges) from non-protein based food, wood molasses	Medium
	Food processing effluent (wastewater) and solids (including sludges) from protein based food	Very high
	Food organics, expired/past used by date protein based food from supermarkets, brewery and distillery effluent and waste	High
	Expired soft drinks, molasses waste, grain waste (hulls / waste grains), starch water waste, sugar and sugar solutions	Low
Food Organics and Garden Organics (FOGO)	Food waste and Green waste from a municipal collection service from households.	High
Grease trap waste	Oil and grease waste recovered from grease traps	Very high
Green waste	Leaves, grass clippings, prunings, tree branches from household maintenance	Low
Inorganic additives with beneficial properties	Bentonite	None
	Crusher dust	None
	Drilling muds (non-CSG and no additives)	None
	Gypsum	Medium
	Lime and lime slurry (inert)	None
Mushroom compost and mushroom growing substrate		Medium

Feedstock	Examples	Odour Rating
Poultry processing waste	Feathers, meal and bone leftovers, egg waste including poultry processing poultry abattoir effluent and sludges	Very high
Soils	Acid sulfate soils and sludge	High
	Clean soil, clean mud, sand	None
Stormwater	Low level organically contaminated stormwaters or groundwaters (tested)	Low
Wood waste from untreated timber	Untreated pallets, offcuts, boards, stumps and logs, sawdust, shavings, timber offcuts, crates, wood packaging	Low

END OF PERMIT

Relevant documents that must be taken into consideration when undertaking the ERAs:

- Notice – IPAR01808810 – Advice Agency Response – Referable Wetland
- Planning and Environment Court – Judgement No. BD3625 of 2005.